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ABSTRACT

The major purpose of the Early Childhood Panel's Annual Reports is to analyze early childhood research supported by the member agencies during most recent fiscal year in order to chart the directions in which federal research programs are moving both within individual agencies and within the federal government as a whole. Chapter I reviews the historical background, operational structure and fiscal year 1976 activities of the Interagency Panel on Early Childhood Research and Development. Chapter II describes the organizational theme: ecological approaches to research in child development. Chapter III examines the combined research of all of the agencies, presenting information on the number of projects and amount of funding in selected categories of research. The major categories pertain to major areas of research (cognitive growth and development, the family, educational services); major kinds of research (basic, applied or evaluative) and research target groups (by age, socioeconomic status and race). In Chapter IV similar kinds of analyses are presented separately for each agency. Appendices include agency plans for 1977, membership list, guidelines for using the panel's information system, symposium participants and documents prepared for the panels on Early Childhood and Adolescence Research and Development. (Author/MS)

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TOWARD INTERAGENCY COORDINATION:

FY '76 Federal Research and Development on Early Childhood

Sixth Annual Report

Prepared for
The Interagency Panel on
Early Childhood Research and Development

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February 1977

Participating Member Agencies of the Interagency Panel on Early Childhood Research and Development

Department of Agriculture (USDA)

Department of Commerce, Center for Census Use Studies

Department of Health, Education, and Welfare (DHEW)

- Office of the Assistant Secretary for Planning and Evaluation (ASPE)
- Office of Human Development (OHD)
- Office of Child Development (OCD)
- Rehabilitation Services Administration (RSA)
- National Institute of Mental Health (NIMH)
- National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)
- National Institute of Child Health and Human Development (NICHD)
- Bureau of Community Health Services (BCHS)
- National Institute on Drug Abuse (NIDA)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- Social and Rehabilitation Service (SRS)
- National Center for Education Statistics (NCES)
- Office of Education (OE)
- National Institute of Education (NIE)

Department of Housing and Urban Development (HUD)

Department of Justice, Law Enforcement Assistance Administration (LEAA)

Department of Labor (DOL)

Office of Management and Budget (OMB)

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INTRODUCTION

The Annual Reports are unique documents produced by the Interagency Panels in that they serve as basic reference works for the research activities undertaken by the member agencies throughout the year. The reports provide the only comprehensive overview of ongoing childhood and adolescence research activities across major funding agencies at the Federal level. They offer Panel members and agencies a first cut at the more extensive and detailed information than can be obtained from the Panels' information system.

The major purpose of the Early Childhood Panel's annual reports is to analyze early childhood research supported by the member agencies during the most recent fiscal year, in order to chart the directions in which Federal research programs are moving, both within individual agencies, and within the Federal government as a whole. These analyses can aid Federal agencies in several ways. First, by filtering out child-related research from the broad array of research areas which many agencies support, they provide each agency a sharper picture of its own research activities which pertain to children. Also, by presenting analyses of the research activity supported by all of the agencies, the report enables an individual agency to compare its own pattern of research support with that of any other agency. In this way, an agency can identify the areas of research in which its funding activity overlaps with that of another agency's, or can detect points of convergence and congruence where increased interagency communication and coordination would be especially fruitful. Finally, an agency can examine the overall picture of Federal research and development in order to determine gaps in the total Federal effort that are relevant to its own research mission, and use this information to guide the development of its forward plans.

Chapter I of the report reviews the historical background, operational structure, and FY '76 activities of the Interagency Panel on Early Childhood Research and Development.

Chapter II describes the Early Childhood Panel's organizational theme: ecological approaches to research on child development. The need for an ecological orientation is discussed, the Panel's recent Symposium on Ecological Approaches to Research on Child Development is reviewed, and a matrix is presented for the categorization and analysis of the agencies' research on the child and his or her ecology. FY '76 Federal research on children is examined within this matrix, to assess the extent to which projects focus on the child, the family, the environment, services and programs, or various combinations of these systems.

In Chapter III, the combined research of all of the agencies is examined, with information presented on the number of projects and amount of funding in selected categories of research. These categories pertain to major areas of research (e.g., cognitive growth and development, the family, educational services), major kinds of research (e.g., basic, applied, evaluation), and research target groups (e.g., by age, socioeconomic status, and race). Changes from FY '75 to FY '76 in levels of activity in these categories are briefly examined. The availability of findings information across the various areas identified by the Panels' Information System is also assessed.

In Chapter IV, similar kinds of analyses are presented, but they are presented separately for each agency, rather than for the overall Federal effort.

In Appendix A, priorities of the agencies for FY '77 and beyond are examined within a matrix of research issues and areas.

In summary, this report presents information on Federally-funded early childhood research projects active in FY '76. Some of these projects are continuing projects and were included in the data base of the last annual report; others are new starts. For the most part, this report describes and analyzes ongoing research, and does not address completed projects. Information about research activities supported and planned during the fiscal years 1971 through 1975 can be obtained from the Panel's previous annual reports (Grotberg, Searcy & Sowder, 1972; Hertz & Harrell, 1974; Hertz & Mann, 1975; Hertz, Harrell & Grotberg, 1973; Stearns, Searcy, & Rosenfeld, 1971).

CHAPTER I

THE INTERAGENCY PANEL ON EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

In 1970, the Interagency Panel on Early Childhood Research and Development was convened by the Director of the Office of Child Development at the request of the Secretary of the Department of Health, Education, and Welfare, and the Director of the Office of Management and Budget. The primary mission of the Panel is to facilitate Federal interagency coordination and cooperation in the planning, funding and analysis of early childhood research and development (covering the age range of prenatal through nine years). The Early Childhood Panel served as an organizational model for another Panel, which was created in 1972 and similarly charged with promoting cooperation and exchange of information between Federal agencies who support work on youth and adolescents. The Interagency Panel for Research and Development on Adolescence, whose age coverage extends from ten years through adolescence and into the early twenties, carries out its tasks in close cooperation with the Early Childhood Panel. The two Panels share information about their agencies' research programs and plans, and diverse problems and issues of interagency concern. Furthermore, in cases where their interests coincide, the Panels participate jointly in special meetings and activities.

Operational Structure

The Panels draw their members from the Office of Management and Budget, ACTION, and from the Departments of: Agriculture; Commerce; Health, Education, and Welfare; Housing and Urban Development; Justice; and Labor. They are chaired by Dr. Edith H. Grotberg, of the Office of Child Development, and are provided general research and support services by the Information Secretariat, established within the Office of Child Development in 1971, and by a contract with the Social Research Group at The George Washington University. The Office of Child Development furnishes the bulk of the contract funds, which are also contributed to by the other member agencies. A diagram of the basic organization of the Interagency Panels is presented in Figure 1. The individuals who currently represent their agencies on the Panel are listed in Appendix B.

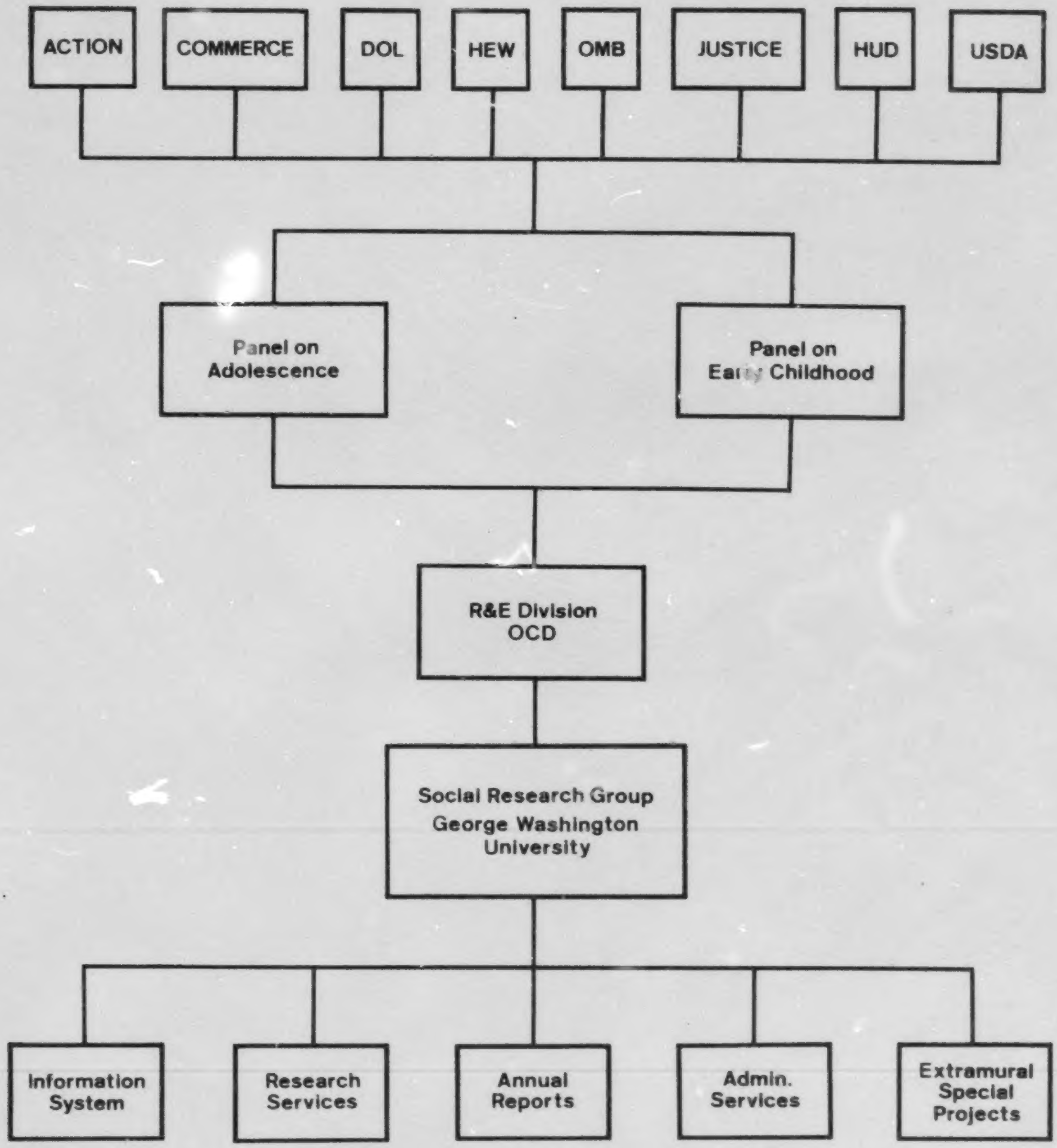
The support system at the Social Research Group has five major functions: (1) the information system; (2) research services; (3) annual reports; (4) administrative services; and (5) extramural special projects.

At the close of each fiscal year, a team of staff members collects information from agency files about the individual research projects active during that year. The team prepares an abstract of each project, and classifies and codes salient aspects of the approach, procedure and content area of the project, using a system developed by the Social Research Group in conjunction with the Panels. The coded information is entered into a computerized data bank, which is available for use by Panel members and which provides important data for the Annual Reports and other documents. (The information system and the data collection process are described further in Chapter III and Appendix C.) As part of its research service, the Social Research Group undertakes for the Panel: state-of-the-art papers, position papers, library research studies, presentations at meetings of professional associations, reports of site visits to demonstration projects, surveys of the member agencies' viewpoints on selected issues, and the annual reports. (See Appendix E. for a list of papers prepared in conjunction with the Panels.) The Social Research Group also provides administrative support, which is especially critical in the dissemination of information both to the Panel membership and to outside groups and individuals. Extra-mural projects are occasionally undertaken to meet the Panel's need to collaborate and confer with individuals having expertise in a broad spectrum of research and professional domains.

Activities of the Interagency Panel During FY '76

Panel members met regularly throughout the year to examine the planning and funding of Federal research in early childhood, giving special

Figure 1
Organizational Chart of the Interagency Panels



attention to areas of need that cut across agencies. The staff of the Social Research Group supplemented these Panel efforts by preparing a variety of working papers and research reports, many of which drew their data from the information system maintained by the agencies represented on the Panel.

Reports on Research Programs in Individual Agencies

Overviews of agency activities are provided in a variety of Panel papers, such as the annual reports and special reviews. During the year, these general descriptions are supplemented by verbal presentations made by individual Panel members.

The National Institute on Alcohol Abuse and Alcoholism. At a joint meeting of the Early Childhood Panel and the Adolescence Panel, George Mills reported on a NIAAA-supported study of recent patterns of drinking among teen-agers. Preliminary results were presented from a national probability sample of seventh through twelfth grades. Mr. Mills discussed the frequency and quantity of alcohol use among these junior and senior high school students, and the pattern of its use in regional and other sub-populations.

The Bureau of Education for the Handicapped, Office of Education. At a meeting later in the year, James Hamilton of BEH reviewed the four bureaus within OE, and distributed materials describing current programs and projects of BEH. During FY '76 BEH consisted of the following Divisions: Assistance to States, which is principally concerned with service money to the states regarding the education of handicapped children; Media Services; Personnel Preparation; and Innovation and Development. The Program Development Branch, within the Division of Innovation and Development, had approximately 150 model programs around the country. Model programs were also being developed by the Bureau's "Gifted and Talented Education" staff and was funded for the first time this year. The emphasis of the Research Projects Branch, also located within Innovation and Development, was restricted by regulation to applied research, funding field-initiated studies, student-initiated studies, and R & D Centers. FY '76 R & D Center efforts were directed toward: the development of curriculum for retarded children; language development in the young child; teacher education research; the preparation of behavioral management packages for teachers of emotionally disturbed or mildly handicapped children. At that time, about 40% of handicapped children were in appropriately designed educational programs, but the ultimate goal is to reach all such children. Dr. Hamilton commented on the large sample size of Project PRIME (Programmed Reentry into Mainstream Education), an intramural effort which is correlational in nature, and which seeks answers to the question, "For whom and under what circumstances is mainstreaming appropriate?" Some of BEH's ongoing projects in the area of early childhood education included: The development and validation of a set of beginning reading materials for young disabled children; (2) a curriculum development project for five-year old handicapped Mexican-American children; (3) the development of an identification package for socially withdrawn children; (4) the development of products to facilitate communication with young, deaf or blind children; (5) an analysis of the effect of competing noise on a handicapped child's perception; (6) projects growing from a widely-noted program which trains parents to work with their children; (7) state of the art reviews in affective development, adaptive behavior, motor behavior and language development in young children; and (8) a longitudinal study of deaf children and of Downs-syndrome children during preschool years.

Center for Census Use Studies, Bureau of the Census. Hal Wallach, Program Manager of the Center for Census Use Studies, presented a report to Panel members on the Center's recent activities. Mr. Wallach explained that the Center focused on: the development of new methodology; the application, testing, and refinement of those methodologies; and technical transfer and capacity building at the State and local levels. The Center uses and coordinates existing data which are regularly collected by State and local authorities, along with census data. Using slides to illustrate his points, Mr. Wallach described highlights of the Center's activities. An initial effort in New Haven in 1966, which was focused on maternal-child health and child care, developed tools to organize, analyze and display data by neighborhood. In subsequent work with Southern California Regional Information System, neighborhood analysis for a very large metropolitan area was undertaken. In 1972 the scope was expanded further, in a study for the Office of Economic Opportunity, of the trends in health, welfare, education and public safety conditions in selected neighborhoods within both rural and urban sites. Tools developed included: geo-coding by small area, a geographic base file; computer software which can be generalized to other areas; computer graphics and display techniques for presentation to decision makers and other interested community people, for use in planning. Mr. Wallach indicated that in many places the Center served as a catalyst to enable various States to share a wealth of existing information to their mutual benefit. An important activity has been to provide a basis for localities to maintain and update the system established.

In concluding, Mr. Wallach asked Ms. Mary Westcott, a senior member of the Center, to describe a study relating to the status of children. Ms. Westcott gave details of the first stage, a feasibility study then in progress, and identified the model as having three State/central-city components (North Carolina-Charlotte; Texas-Austin; Kentucky-Louisville). The second stage will involve the establishment of prototype measurement markers at the State and local level, and the development of technical tools to assist in describing major aspects of the status of children, families with children, neighborhood conditions, service deficiencies, and service utilization patterns.

United States Department of Agriculture. At a Panel meeting in January, 1976, Dr. Mary Jane Strattner of the Cooperative State Research Service, USDA, talked to the Panel about current regional research projects with rural children and families. The CSRS works through the State Agricultural Experiment Stations at each of the land grant institutions. About 25% of the additional appropriation of Hatch Act funds since 1955, supporting these research stations, has been allocated to regional research. Experiment stations are divided into four regional research groups: Western, North Central, Northeast, and South.

After reviewing some of the processes by which research is planned and undertaken within this regional system, Dr. Strattner described two of the regional projects with which she had been working and which dealt mainly with the social development of children. In one Western Region project, called "The Development of Social Competencies in Children," the researchers want to identify and classify the competencies perceived by various ethnic populations and then to look at the settings in which the competencies arise. Among the independent variables are the extent of mobility and occupation of the family, the ordinal position of the child in the family, and the educational level of the care givers. One of the techniques with which they are working is film clips of children behaving with peers or interacting with adults, from which adults are asked to identify the kind of child they would value and why.

The second project, called "The Life Span Analysis of Children's Mental and Social Development," was being conducted by the North Central Regional Group. They will gather cognitive and social data on the same subjects, and are developing behavior rating instruments. One of the researchers is also exploring comparison of instrument results with videotapes of family interaction. This will be a three-year longitudinal study of three, six, and nine-year old children.

Office of the Assistant Secretary for Planning and Evaluation. Dr. Carol McHale of the Division of Human Development and Social Services, OASPE, spoke to the Panel members about some of the staff functions of that office. She presented an organizational chart, pointing out that there were two clusters of offices within the Department of Health, Education, and Welfare structure: the "program offices" of Health, Education and Human Development, Social Security, and Social Rehabilitation Services, and the "staff offices" of Comptroller, Legislation, Administration, and Planning and Evaluation. Planning and Evaluation is essentially a staff office which performs a broad range of overview activities. Dr. McHale described the four major functions within her own office (Social Services/Human Development) as quality assurance, policy development, policy analysis, and coordination and review.

The quality assurance role is intended to assure policy relevance, priority, and technical soundness of research and evaluation projects. The policy development function relates to the day-to-day implementation of legislation or departmental initiatives. Connected with the policy and analytic role were three studies then in progress: (1) a large scale investigation of the Federal role in long-term care; (2) a study of eligibility requirements as laid out in the regulations for implementing Title XX Amendments to the Social Security Act; and (3) the evaluation of the Appropriateness of the Federal Interagency Day Care Requirements, with recommendations for change. This study addresses many aspects of day care, including the effect of day care on children of different ages, the relationship of the day care environment to child development, staff-child ratios, state licensing as an alternative to Federal regulation, and an historical study of the Federal involvement in day care.

The National Institute of Neurological and Communicative Disorders and Stroke. Dr. Joseph S. Drage described the NINCDS collaborative perinatal project, explaining first that the Institute had been reorganized into five program areas. The Developmental Neurology Branch in the Neurological Disorders Program has responsibility for this longitudinal study. The objective of the project is to study the relationship between the abnormalities, conditions and events in pregnancy, labor and delivery, and the subsequent neurological and mental development of the child. Fourteen major medical centers collaborated in the project, involving 58,000 pregnant women and the offspring of their pregnancies, who were followed through the ages of 7 and 8 years.

The sample, drawn from urban clinic populations, turned out to be approximately 45% white, 47% black, and 6% Puerto Rican. While the study missed rural poor, it included women from high socioeconomic city populations. The study was conducted in a research environment with a multidisciplinary staff, and with the centers providing 15-17 year commitments for a longitudinal study. Women registered for the study over a six year period, 1959 through 1968. The children were seen at four months for a general exam, at eight months for motor and mental developmental scales, at one year for neurological and pediatric exams, at three years for speech, language, and hearing assessments, at four years for a psychological battery which included Binet IQ and an assessment of fine and gross motor performance, and at seven years for a general battery of examinations including pediatric, neurological and psychological tests and visual screening. Eighty percent of the children who were born into the study and did not die subsequently were followed up through their 7th year.

Dr. Drage discussed the analyses of the data, explaining that a group of consultants who were familiar with the program had reviewed the original goals, the publications that emerged from the study, and what was being done outside the study, and recommended to the Institute ten areas for primary analysis. There will be monograph reports in each of these ten areas. These areas are: cerebral palsy, mental retardation, visual abnormalities, communicative disorders, convulsive disorders, learning disorders, minimal brain dysfunction, congenital malformation, birth weight/gestational age relationships, and general pathology and neuropathology.

To give the Panel an idea of the scope of the analyses, Dr. Drage mentioned several secondary areas of studies: toxemia of pregnancy (patterns of blood pressure in pregnancy and their relations to neonatal mortality); hyperbilirubinemia; maternal infection during pregnancy; maternal drugs during pregnancy; physical growth and development from birth through seven years; and a genetic analysis including the study of twins and siblings (approximately 9000 repeat pregnancies and 600 sets of twins).

International Children's Center. In addition to the above reports on agency activities, the Panel heard from Dr. Paul Vesin, Editor of Le Courrier and on the staff of the International Children's Centre in Paris. Dr. Vesin described the work of the Centre, which is sponsored by the French government and UNICEF, and was established around 1950 to help in the rehabilitation of children in war-devastated Europe. Its goals have since become worldwide, in recent years concerned principally with children in developing countries. Dr. Vesin discussed the three main activities of the Centre: training, information and documentation, and research. The areas of training include public health, child development, social work, teaching, and social pediatrics (the care of the whole child). He stated that one of the important activities relating to information and documentation is the publication of Le Courrier. Dr. Vesin also described one of the Centre's research projects, a 20-year study of the growth and development of the normal child, conducted in France, England, Uganda, Dacca, and Senegal.

Comparability in Research

The Panel's interest in comparability in research stems from concern at the national level that research findings too often fail to converge even where projects focus on similar problems. Empirically derived information needs to be cumulative if it is to provide a broad basis for social policy decisions and if scientific advances are to keep up with changes in social practices and events. The meaningful synthesis of research findings hinges in part on the degree to which the concepts, measures, and procedures used by different investigators are comparable. Meaningful cross-study analyses of findings are difficult, if not impossible, when there is no way to determine the relation between the different methods which were used to derive those findings. The problem is aggravated by the understandable inclination of many researchers to develop new terms and measures with an eye toward the needs and constraints of their own studies, rather than the overall pattern of research in a general area.

Issues relating to comparability have been explored in an article (Bell & Hertz, 1976) written for the Panels and published in the March, 1976 issue of Child Development. The article reports evidence that societal change can exceed the rate at which dependable, agreed-upon findings emerge from relevant research efforts, and examines current funding and research practices to determine obstacles to research progress. Self-corrective mechanisms that already exist in the system are identified along with areas in which new mechanisms are needed. Also described are examples of spontaneous developments among groups of investigators interested in achieving more rapid progress through greater comparability and generalizability of findings. The paper suggests steps that can be taken by individual investigators, academic departments, scientific disciplines, and supporting foundations or agencies.

Previous Panel efforts to assess the scope of the problem had included an analysis of the potential for comparability in studies on parenting skills. (Hurt and Oeullet, 1974) A sample of 68 project proposals, funded by nine different agencies, was examined to determine: (1) How well are variables identified in each project? (2) How well is the sample defined in each project? (3) What efforts are made to enable other interested researchers to compare the results of one study with findings of related studies?

A similar analysis (Hurt, 1974) of family research projects supported by the Office of Child Development, was completed prior to FY '75 for a group of principal investigators who met to discuss the methodology, hypotheses, demographic data, samples and instrumentation of their projects. During FY '76 Panel members were kept informed about the continuing activities of this group, and reports (Lindsey, 1975, 1976) were prepared on the instruments used in the projects. In addition, a study of 36 projects dealing directly with the family was undertaken.(Hurt & Lindsey, 1976) This study had two objectives, one to assess the degree of comparability present and the second to disseminate information among projects so as to facilitate increased comparability.

Three major criteria, recommended by the Panels, were used in the assessment:

1) Was there evidence in the proposal that efforts had been made in research design so as to allow for alignment of results with prior studies?
2) Was the sample under investigation precisely defined?
3) Were the variables defined clearly and completely, so that other researchers would understand what was being investigated?

Diversity was the rule for the 36 projects and so four major groupings were made wherein some comparability might be expected. Those groups were: (1) child-focused studies; (2) parent-focused studies; (3) institution-focused studies; and (4) studies dealing with child abuse and neglect.

In the case of the first criterion, the data in the proposals were sparse. Prior consideration was not given to aligning the results with those in the literature.

Sample definitions were included more frequently in the proposals, but the descriptions of the samples were often too limited.

With regard to the variables under investigation, only in the child abuse and neglect studies was there any significant commonality among the instruments. All told, the 36 projects used 106 instruments which were identified in the literature. Seventeen of these were used at least in two different projects and one was used in 7 different projects.

In summary, literature was rarely reviewed for alignment of results, and samples and variables were defined more often, but there was room for considerable improvement.

Tests and Measures

For several years the Panels have worked to develop the capacity to analyze the measurement instruments being used in all of the research projects funded by the member agencies. A second in a series of reviews (Heyneman and Mintz, 1976) was presented to the Panels in the Spring of 1976. The review covers 1,570 instruments which were named in the proposals of projects funded by Federal agencies in FY '75. The titles of only about a third of these instruments could be located in test bibliographies. The Panels raised the question: Was there any relationship between an instrument's quality and the frequency with which it was used? Ordinal ratings of 230 of the tests were available from the UCLA Center for the Study of Test Evaluation. The Panel report examines the relationship between the frequency with which a particular test is cited in Federally-sponsored research proposals and its quality as rated by the UCLA Center.

> These data indicate three things. First, taken as an undifferentiated unit, the better tests in general are used

> more often. But, second, this generalization is more true of some categories of tests than others. It is more true of achievement batteries, tests of vocational skills and tests of intelligence, in that order. Third, particular problems appear in the use of tests of reading and of personality. In these latter two categories the higher quality tests are not used more often.
>
> It is evident that the normal process of selecting tests, in which researchers choose the one they think is best, works more efficiently in some test categories than others. In some subjects there is more agreement on measurement definitions, more communication between researchers, and consequently producing fewer titles to choose from. This would pertain more to the field of academic achievement research than to personality.
>
> The Interagency Panels may be able to serve a useful purpose with these data. Because the Panels house the collection of the most current and the most complete information on test usage, they could extend the function they now perform for ongoing research and research findings, to tests in particular. Now the Panels can answer a question from consumers in the field or from government agencies as to which tests are used more often. This in itself is valuable and unique. Furthermore, the test information can assist in efforts to encourage greater accumulation of research findings. For as this paper has tried to demonstrate, the Panels can point out not only which tests are used more frequently, but which categories of tests might be especially deserving of attention in terms of quality. (Heyneman & Mintz, 1976, p. 10)

Sample Descriptions in the Research Literature

In their discussions over the past few years, the Panels have identified the description of concepts, measures, and procedures as one level at which efforts to increase comparability need to be applied. The more precisely and clearly that these aspects of the research process are set forth in reports and publications, the more easily research findings can be interpreted, compared, or replicated. Adequate descriptions of sample groups and information on demographic variables are especially crucial for meaingful generalizing of findings, and for sorting out the contributing influences of background variables. White and Duker (1973) surveyed practices for describing samples of children in several psychological journals, and presented evidence that researchers need to provide more accurate and meaningful information about their samples, especially with regard to social class, ethnicity, and neighborhood.

In FY '76, a Panel study (Hertz, Hurt, Mangus & Mann, 1976) was completed which replicated White and Duker's work, using a wider sample of journals and more recent issues. The Panel's study also goes beyond the previous research in examining the frequency with which sample characteristics are specified within various content areas. The survey covered all of the articles published in the 1974 volumes of 24 selected journals, which met the criteria of having a research sample and dealing with children and youth between the pre-natal period and 24 years of age. A total of 1,353 articles qualified. Each of the articles was classified by age category and by selected content areas: (1) physical development (disorders, disease); (2) physical development (other); (3) cognitive development; (4) socioemotional development; (5) the family; (6) the broader environment; (7) intervention programs and services; (8) education; (9) health. In addition, each article was scrutinized for information pertaining to 35 sample characteristics.

The levels of reporting sample characteristics in these articles are similar to those found earlier by White and Duker. The frequencies with which some of the sample characteristics are reported, however, differ across research on children and research on adolescents. Child-related studies more consistently describe the age, race, and social class of the individuals in the sample, and the school or schools from which the sample is drawn. Furthermore, information about the ethnicity and neighborhood of the sample is included slightly more often in child-related studies than in adolescent-related studies. The specific grade levels of students are more likely to be indicated in childhood research articles; studies on adolescents tend to describe the grade levels of their samples in terms of broad descriptors, such as junior high school, high school, and college.

While for many other descriptors the level of reporting is equivalent in both childhood and adolescence research, adolescence studies offer more information in only three of the categories examined; the sex of the sample, the time of the data gathering, and scores on standardized tests (for total subject pool).

The survey indicates that the number of the children in the sample is specified in almost all of the studies, the sex of the children in the sample is specified more often than not, and the age of the children is indicated in about one third of the articles, as is the grade level. Race and social class are reported in about one fifth of the articles, whereas the time of data gathering is documented in only about a tenth of the studies. Other characteristics, such as ethnicity, language dialect, neighborhood, school, and parental income, occupation and education are rarely described.

Practices for reporting characteristics of samples do vary across the particular areas into which the journal articles were classified. Such differences are to be expected, of course. Judgments about the relevance and necessity of reporting particular sample characteristics are guided by prior theoretical and empirical work, and arguments can be made for the inclusion of certain information about the sample in one area of research, but not in another.

Thus, while the breakdown of the survey data by areas of research does not _necessarily_ identify imbalances in reporting practices, by revealing differences it at least serves as a stimulus and guide for further consideration of specific practices within particular areas of research.

Outreach Activities

From its inception the Panel has worked to involve in its activities interested individuals and groups from the Federal government and the general research community, both as sources of expert advice and as consumers of the information it collects and synthesizes. The Panels have tried to accomplish this through invitational conferences, presentations at professional societies, and publications in journals and newsletters. For instance, in addition to the Bell & Hertz article in _Child Development_, Panel-related reports and editorials have appeared in the _Courrier_ (a publication of the International Children's Center), the newsletter of the American Vocational Educational Research Association, the Educational Research Manager, the Journal of Youth and Adolescence, the newsletter of the Society for Research in Child Development and the newsletter of Division 7 of the American Psychological Association.

Discussions and symposia have been sponsored by the Panel at the annual meetings of organizations such as the American Psychological Association, the American Educational Research Association, the Eastern Psychological Association, and the American Orthopsychiatric Association. The most recent was at the American Educational Research Association meeting in San Francisco, April, 1976, involving Dr. Edith Grotberg, OCD, Dr. Maure Hurt, Jr., Social Research Group, Dr. Lois-ellin Datta, NIE, and Dr. David Pearl, NIMH.

Previous conferences convened in Washington by the Interagency Panels have focused on a variety of issues, including: (1) research on the family; (2) comparability in research from the perspective of journal editors; and (3) comparability in research from the perspective of university deans and professors in charge of graduate training programs. In FY '76, the Panels organized two significant conferences, one involving state policy makers, and the other involving researchers with expertise in research on the ecology of child development.

The Texas Conference. The Interagency Panels have undertaken a variety of activities in order to develop and classify important policy questions and problem areas which can be addressed by their member agencies. During FY '76 the Panels concentrated in particular on research issues pertaining to youth participation, in the case of the Adolescence Panel, and the ecology of childhood, in the case of the Early Childhood Panel. As one aid in identifying and defining current social problems and research needs, the Panels have sought increased interaction with groups of "consumers" of research information from across the nation. Consumers of research findings comprise a heterogeneous group of individuals and institutions, and include: researchers; practitioners in such fields as physical and mental health, welfare, and education; administrators, legislators, and decision and policy makers at the national, state, and local levels; and parents, as well as others.

The Workshop on Research and Policy Needs was the Panels' first major effort to meet with consumers other than researchers and practitioners. The consumer group which participated in the two-day discussion with Panel members and other interested individuals from the Federal agencies was the State of Texas, represented by ten individuals from: the Youth Services and the Early Childhood Development Divisions of the Texas Department of Community Affairs; the Texas Department of Health Resources; the Texas Department of Public Welfare; the Texas Youth Council; the Texas Legislative Budget Board; the Texas Office of State/Federal Relations; Child, Inc. (Austin, Texas); and the University of Texas at Austin.

Prior to the workshop, copies of the two Panel reports entitled "Matrix of Issues Relating to Ecological Studies of the Child" and "A Sub-Committee Discussion of Youth Participation: The Interagency Panel's Subject Focus in its Effort to Increase Research Comparability" were distributed to the Texas participants. They examined these matrices of research issues and in turn developed their own compendium of research and policy needs. Their document, entitled "Texas Research Issues," contributed the sets of issues and questions which were used as the foci of the workshop discussions.

The workshop was held on May 6th and 7th, 1976. The participants were welcomed at the opening morning session by Dr. Edith H. Grotberg, Chairperson of the Interagency Panels, who reviewed the history of the Panels, and explained the Panels' continuing efforts to coordinate research on children and youth. During the remainder of the morning session, the participants from Texas provided background information on their state agencies and institutions, and identified some of their major needs for research information.

During the afternoon the participants divided into three discussion groups, organized around different sets of issues: (1) early childhood conditions and early intervention/later outcomes, in the context of the family; (2) community-based services for delinquent youth/school truancy; (3) educational questions relating to reading and classroom conditions/ handicapping conditions and the effective use of educational resources.

The participants reassembled in a plenary session the next morning, at which time reports on the group discussions were presented, and final comments and recommendations were made.

Major points made in the three workgroup discussions are listed below. No priorities were assigned to these points, nor did each point necessarily represent a consensus of the group.

Workgroup 1

1. Can more clarification be provided regarding each agency's definition of research and service programs?
2. Can better techniques be established to channel information about the availability of grants and contracts to interested parties?
3. Should the time period between the issuance of an RFP and the deadline for response be extended?
4. Can more information about agency plans and priorities be provided in advance of specific RFP's?
5. Can Federal agencies encourage quicker and more comprehensive dissemination of research findings?
6. Mechanisms should be established to facilitate interaction and exchange of information between program/policy people and researchers, especially at large private universities.
7. There is a need for expanded Federal/State communication regarding research and policy needs.

Workgroup 2

8. There is a need for systematic research on alternatives to institutional services for youth, in order to determine which options work best, under what conditions, and to determine their impact on youth development.
9. Can strategies for social change be developed and disseminated, to help overcome resistance to non-traditional approaches by State and local governments, and by communities and existing services?
10. An evaluation of the status of de-entralization of decision-making is needed, along with research on the impact of decentralization of decision-making on the delivery of services.

11. Greater emphasis in research and service programs should be placed on the training of youth program personnel.

12. More research is needed on how standards are established (e.g., for day care) and how such standards relate to the quality of services.

13. A more formal and continuous exchange of information between the Federal and State levels should be established, which includes aid in contacting researchers, in synthesizing research findings, in evaluating the credibility of findings, and in relating research results to non-technical users.

Workgroup 3

14. Can Federal agencies provide more research and evaluation support to local administrators who have effective programs, but lack the resources to conduct evaluations?

15. Can mechanisms be established to provide independent analyses of research data to consumer groups such as legislators and local-level administrators, and, similarly, to provide judgments of the quality and credibility of research projects? Such a process may evolve out of the Panels' efforts to increase comparability in research.

16. More attention should be given to the coordination of Federally-funded research and service programs. There should be an expansion of applied research (but not less ba basic research) that will be more closely linked to operational program needs.

17. The identification of long-range research needs should be given higher priority. One method to identify significant problems might be to examine research topics that have endured over the last several decades.

18. How can the States make more significant input into the plans and priorities of the Federal agencies?

In addition to the suggestions and questions listed above, three general recommendations for follow-up activities were made during the closing session. It was recommended first that the Interagency Panels examine researchable issues identified by the Texas administrators and researchers, in order to determine how they fit into the Panels' matrices of research issues relating to youth participation and ecological research, and to identify the particular Federal agencies which can address the different areas. A short time after the workshops, a paper was prepared in response to this recommendation, entitled "Texas and Federal Needs for Research on Children and Youth: A Follow-up to the Workshop on Research and Policy Needs." The paper attempts to relate Texas research issues and needs to research and development activities at the Federal level. Using data on FY '75 Federally-funded projects, the cross-agency distribution of research in specific areas is examined and the issues are classified within the research matrices developed by the Interagency Panels.

A second recommendation was that syntheses of ongoing research in several areas be prepared, as a way of meeting the information needs identified by the Texas agencies. Three such papers were subsequently prepared, synthesizing FY '75 research projects relating to: (1) infant mortality and morbidity; (2) juvenile delinquency treatment and prevention programs; and (3) handicapping conditions. These papers briefly describe the background and scope of the issues involved, present a breakdown by Federal agency of the number of research projects which focus on these issues, and provide the titles and abstracts of the projects in each of the three areas, again broken down by agency.

The third general recommendation made at the workshop was that contacts between the Panels and the Texas State agencies be strengthened in order to provide a more effective and continuous exchange of information about agency research activities, priorities, and plans. Shortly after the workshop, the papers described above were distributed to the Texas participants as an initial step in continuing the dialogue begun at those meetings. These papers serve as general guides to Federal research and development activities, and attempt to clarify the extent to which and the ways in which Federal agencies are addressing issues identified by the Texas agencies and institutions. The Texas administrators were advised that a necessary next step would be for them to provide feedback to the Panels concerning the usefulness of these and other kinds of information.

The Symposium on Ecological Approaches to Research on Child Development. The Interagency Panel on Early Childhood Research and Development has selected ecological studies of child development as a theme to guide its coordination efforts. During FY '76 the Panel developed a series of working papers to provide a framework for the analysis of research on children, in order to aid member agencies in categorizing and organizing research issues which are of interest to them, within the context of the ecological theme. A key component of these papers is a matrix within which research issues can be categorized. In order to further explore ecological research approaches, the Interagency Panel sponsored the Symposium on Ecological Approaches to Research on Child Development, which was held in Washington on September 27 and 28, 1976. The matrix and the Symposium are described in greater detail in Chapter II of this report.

Research Findings: A New Panel Effort

The Interagency Panels made an important decision in FY '76 to expand the scope of their information system. In response both to requests from many users of the system and to their own concern for cumulative scientific knowledge and comparability in research, Panel members decided to add to their information about ongoing Federally-supported research, the findings of those projects as they become available. An effort was begun to include summaries of interim or final reports within the information system, thereby providing easy access to findings while they are current. This new capability allows policy makers and research and development planners to know the outcomes of the most recent research activities, including negative findings as well as positive, without going through the laborious process of contacting investigators individually, or waiting for a long period (or even in vain) for the publication of findings in journals or government reports.

The procedures used to collect information on findings vary across the agencies, reflecting their different needs and preferences. The basic procedure used with many agencies, however, is to collect information from the principal investigator, by means of a questionnaire developed by the Panels. Questionnaires are mailed to the investigators of projects which have recently terminated or have been active for more than a year. In addition, information is obtained directly from the files of some agencies, and in these cases principal investigators are not contacted by the Panels' staff.

The FY '76 findings collection has been completed, and the information has been added to the computerized data bank maintained by the Interagency Panels. A brief description of this information is presented in Chapter III of this report.

Information Utilization in FY '76

Since the Early Childhood Panel was formed in July, 1970 and the Adolescence Panel two years later, a computerized information system has been maintained to classify current research on early childhood and adolescence. In addition to providing support to the Interagency Panels and their member agencies, information from the system is available to members of the research community on a cost-reimbursable basis.

This Interagency Research Information System (IRIS) has been used by Federal agencies for different purposes, which include the following: (1) to survey ongoing research in a particular field prior to developing their own initiatives; (2) as a convenient way to respond to routine requests for information concerning their own projects; (3) to indicate to their contractors and grantees how they might enhance comparability across projects; and (4) to analyze information across Federal agencies on research efforts for children and youth in general and specific target populations. In addition to fulfilling these and other informational needs, the Social Research Group produces and distributes publications and documents under the Panels' direction.

The following figures help to illustrate the use of the Panels' resources. From January to December, 1976, the Social Research Group provided 7,592 publications to members of the Panels, other Federal, State, and local decision makers and members of the research community, a 16% increase in the dissemination rate over the last year. Nineteen new reports were published in FY '76, and demand for several of the older documents continues. There have also been many requests for computer-generated lists of project titles, and for complete project abstracts, which provide information on the objectives, methodology, sample and instrumentation of each project. Requests from the FY '76 file resulted in the distribution of more than 10,200 abstracts. In addition, several thousand informational items were distributed, such as working papers, minutes of meetings, agendas, and memoranda. The total number of individual mailings from January to December 1976 was 8693, many containing a number of materials.

CHAPTER II

ECOLOGICAL APPROACHES TO RESEARCH ON CHILD DEVELOPMENT

Since its inception, the Interagency Panel has identified key research areas and approaches that merit continued or increased support. The Panel has focused on these key areas in its efforts to articulate gaps and imbalances among the member agencies' activities, and to facilitate coordination of research planning and support. General categories which over the years have provided an organizational framework for coordinating and analyzing early childhood research and development activities include: (1) applied and basic research; (2) global research; (3) research to benefit all children; (4) longitudinal research; (5) research on the research process; (6) research on the developmental process; (7) research on the family; and (8) research on the community and society. (For more detailed discussion of these emphases, see prior annual reports of the Interagency Panel, especially Hertz & Harrell, 1974, and Stearns, Searcy, and Rosenfeld, 1971).

Over the years, the Panel has concentrated on one or another of these key areas, using them as themes to strengthen the basis for coordination and exchange of information among the agencies. Previous Panel themes have included family research, and comparability in research (which evolved out of discussions of longitudinal approaches and research on the research process). During the last two fiscal years, the Panel has worked with the theme *ecological approaches to research on child development.* This theme brings together elements of most of the Panel's previous emphases, such as global and longitudinal approaches, and research on the developmental processes, the family, and the community/society.

The Need for an Ecological Orientation

During recent years, the field of child development has witnessed an intensification of pressures to move away from its long-standing emphasis on narrowly defined aspects of development, deliberately studied out of the context of everyday situations. Although the original emergence of child development as a scientific discipline was shaped by practical concerns for the health, rearing, welfare, and education of children (Sears, 1975) the 1950's and early 1960's saw for the most part a rigid separation between laboratory research and applied research and development. On the one hand, child development variables were operationally defined by performance on tests which could be easily and quickly administered to children, in laboratory situations from which "outside" cues and stimuli were intentionally excluded, in order to avoid confounding variables. On the other hand, research on real social problems was frequently carried out in naturalistic situations with little regard for experimental rigor and sometimes influenced more by the biases of the investigators than the events under study. Many social programs were not even subjected to evaluations, but were judged on more pragmatic, usually economic and political criteria. (For comprehensive descriptions of the forces which have shaped the growth of the child development field, see Sears, 1975 and Senn, 1975.)

Concerns that this separation of laboratory research and "socially relevant" research is deleterious to each have increased markedly in the past decade. Arguments have come from many quarters that both science and social programs need models and findings that pertain to the "whole" child, and his or her interactions with the family, the neighborhood, and the institutional and cultural environment. Within the field of child development, this ecological orientation encompasses many approaches to research. These approaches may differ along various dimensions of the research process, including the theoretical underpinnings of research, the methodology of research, the focus or content of research, and even the role of research with regard to social needs and social policy. That is, ecological studies may focus on different issues and phenomena, draw on different theoretical models, and employ different research methods and instruments. They reflect a common concern, however, for not just the child, family, and environment in themselves, but the ecology of childhood--the systems through which children, and the people, institutions, and physical and social circumstances in their lives, are interrelated.

Bronfenbrenner (1976a), who is one of the chief advocates of the ecological orientation within the field of child development, argues that three basic requirements must be met if significant progress in child research is to occur. 1) Research cannot be restricted to the laboratory, but must also be carried out in the real life settings in which children live. 2) Human development must be studied as a function of systems at two levels. One level is the interaction between the child and the surrounding environments of home, school, peer group, work place, neighborhood, and community. The other level is the interrelations between these environments. 3) Person-environment and environment-environment relations should be investigated through ecological experiments, which are systematic contrasts between two or more environmental systems, with efforts to control for and assess possibly confounding interacting components. Bronfenbrenner (1976b) further defines the ecological experiment through a lengthy series of propositions.

Matrix of Research on the Child's Ecology

As indicated in the previous chapter, over the past year the Interagency Panel has developed a general framework for analyzing research on children, in order to aid member agencies in the planning and coordinating of research activities. A major work statement has been prepared. entitled "The Ecology of Child Development: Research Issues," for distribution to the Federal agencies which support research on children. A central component of this paper is a matrix within which research issues can be categorized. The Panel has chosen to categorize the primary foci or content areas of research projects according to four major systems in the child's ecology: (1) the developmental processes; (2) the family; (3) the broader social and physical environment; and (4) services and intervention programs. These systems were selected because they are major categories in the classification scheme used in the Panel's information system.

The basic matrix (Figure 2) is derived by displaying the four major systems across the top and down the side of the chart. The resulting matrix contains 16 cells, each of which represents a research focus determined by the intersection of one row and one column. Disregarding the six cells which are duplicates (indicated by hyphens), there are 10 different research categories identified in the matrix: (A) child development, (B) child

Figure 2

Matrix of Research on Major Systems in the Child's Ecology

	Child Development	The Family	Broader Social and Physical Environment	Services/ Intervention Programs
Child Development	A CHILD	B CHILD ⇅ FAMILY	C CHILD ⇅ ENVIRONMENT	D CHILD ⇅ PROGRAMS
The Family	---	E FAMILY	F FAMILY ⇅ ENVIRONMENT	G FAMILY ⇅ PROGRAMS
Broader Social and Physical Environment	---	---	H ENVIRONMENT	I ENVIRONMENT ⇅ PROGRAMS
Services/ Intervention Programs	---	---	---	J PROGRAMS

development and the family; (C) child development and the broader social and physical environment; (D) child development and services/intervention programs; (E) the family; (F) the family and the broader social and physical environment; (G) the family and services/intervention programs; (H) the broader social and physical environment; (I) the broader social and physical environment and services/intervention programs; (J) services/ intervention programs.

The four major systems identified earlier are represented by the cells along the diagonal in Figure 2. Included under these general categories would be research which concentrates primarily on one system or another, but not on two or more of these systems. Research attributed to these cells can pertain, however, to interactions and interrelations among subsystems within each of the domains identified.

The remaining cells in Figure 2 indicate only those categories of research where at least two major systems are involved. The possibility of reciprocal transactions between the two systems in each of these cells is indicated by the double arrows, although a focus on interactions between the two systems is not a criterion for the inclusion of research on these two-system cells. A research focus on more than two systems can be represented by combining two or more cells.

How the Matrix Can Be Used

The matrix of research issues is intended to be a working tool for the Panel and its member agencies and can be used in several ways.

Analyzing ongoing research. First, the matrix can be used to determine how Federally-supported research activities are distributed across the areas which it articulates. For instance, what portion of the research has a focus on the family only? What portion has a focus on both the family and the broader environment? FY '76 research activities are broken down in this way for the Federal government as a whole, and for individual agencies, in a later section of this chapter. Thus, for instance, agencies interested in expanding or initiating commitment to one of these areas can ascertain the extent and location of relevant research currently underway. Similarly, the matrix identifies areas of low and high degrees of activity, and in this way can guide plans for future funding.

Identifying agency interests. The matrix can also be used as a framework for the identification and comparison of research interests of the member agencies. Agencies can examine specific research interests which concentrate in individual cells of the matrix in order to determine areas of mutual concern which would be appropriate for interagency cooperation in the development of ecological research strategies. Toward this end, the Panel's work statement lists specific research issues in which member agencies have expressed interest.

Developing new research issues and priorities. A third use of the matrix combines elements of the two uses sketched above. By using the Panel's information system, members can identify sub-areas in which significant amounts of activity are occurring across agencies, and can then combine individual sub-areas to generate new issues. Some of the sub-categories from the Panel's classification scheme are listed in Figure 3, beneath the major categories to which they apply. For example, from the family column and the broader environment column one can draw the sub-areas of intrafamily relationships and social change. By submitting a request to the information system, one can then determine (1) the number of FY '76 research projects on children pertaining to intrafamily relationships, to social change, and to both of these sub-areas simultaneously, and (2) which agencies support these projects. In addition, agencies may want to examine the kinds of questions being asked in this subset of studies, and generate ecological research questions that have relevance to several agencies, such as: What are the effects of changes in employment practices on the relationships between children and their father and/or mother?

Figure 3

Major Systems of the Child's World: Selected Research Subcategories[1]

Child Development

- Physical development
  - Body growth
  - Sensory-motor development
  - Handicaps
    - Deaf
    - Blind
    - Epilepsy
    - Cerebral Palsy
    - Orthopedic
    - Communicative disorder
    - Mental retardation
    - Learning disability
    - Autism
  - Disease
  - Nutrition
  - Epidemiology
  - Pregnancy and childbirth
- Cognitive development
  - Perception/attention
  - Thought processes
  - Reading
  - Language
  - Handicaps
- Socioemotional development
  - Perception of self
  - Interpersonal relationships
  - Attitudes
  - Values/morals
  - Motivation
  - Personality
  - Emotional development
  - Social behavior
- Overall child growth and development

The Family

- Physical environment of home
- Family structure
  - Nuclear family
  - Single parent family
  - Extended family
  - Working mother
- Child rearing practices
- Intrafamily relationships/family functioning
  - Parental roles/behavior
  - Sibling relationships
  - Parent-child relationships
- Family health
- Family's interface with society
- Parent training

Broader Social and Physical Environment

- Geographical location
- Housing conditions
- Facilities and equipment for children
- Cultural factors
- Socioeconomic factors
- Religious factors
- Mass media
- Social crises (e.g., noise, crime, unemployment)
- Social change
  - Government policy changes
  - Changing sex roles
  - Changing family patterns
  - Changing employment practices
  - Desegregation
- People in child's environment
  - Community members/citizens (adults other than parents)
  - Peers
  - Psychologist/social worker/counselor
  - Child care worker
  - Educational personnel
  - Police/law enforcement officials
  - Medical/health care personnel

Services/Intervention Programs

- Kind of service
  - Day care
  - Educational services
    - Special education
    - Infant education
    - Preschool
    - K-6th grade
  - Health/medical services
    - Preventive (immunizations, screening and diagnosis)
    - Pre- and post-natal care
    - Drug abuse treatment & prevention
    - Nutrition programs
    - Mental health services
  - Welfare services
    - Foster care
    - Adoptive services
    - Child abuse prevention & treatment
    - Emergency services
    - Advocacy
  - Delinquency treatment
  - Recreation
  - Law enforcement
- Place:
  - Home
  - School
  - Group care center
  - Hospital
  - Medical clinic
  - Community center
  - Place of employment
  - Residential institution

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[1] These research categories are drawn from the classification scheme used with the Interagency Panels Information System (Social Research Group, Classification of Federally-funded research in early childhood and adolescence, June, 1976).

The Distribution of FY '76 Early Childhood Research Across the Matrix Cells

The Panel's data system contains information about 4,406 FY '76 research projects pertaining to children and adolescents. Of these, 3,277 projects pertain to children under 10 years of age, accounting for $379.5 million in Federal funds. How are these early childhood research projects distributed across the research areas depicted by the matrix?

The Overall Federal Effort

The data presented in this section refer to the major foci of the research projects. Figure 4 indicates the number of projects and the amount of funding in each of the areas of the matrix. For each of the one-system cells along the diagonal, the figures are derived by determining the number of projects which have a primary focus on that system, but no secondary focus. (See Chapter III for an explanation of primary and secondary foci.) For each of the six two-system cells, the figures are derived by determining the number of projects with a major focus on both of these systems.

For instance, Figure 4 shows that there are 634 FY '76 projects with a major focus only on child development, which represents 19.3% of the 3,277 early childhood research projects in the information system, and accounts for $32.5 million in funding, or 8.6% of all funding. None of these projects has a secondary focus on the family, or the environment, or services/intervention programs. Moving to the next cell to the right, we see that there are 110 projects with a major focus on both child development and the family, or 3.4% of all of the projects.

Figure 4 shows clearly that the research activities are not distributed evenly across the ten cells of the matrix. Slightly more than half of all of the early childhood research focuses exclusively on services or intervention programs. That is, these 1,701 projects address issues relating to the organization or delivery of services and programs, rather than their impact on the development of children, or on families, or their interaction with the child's community, culture, or other aspects of the broader

Figure 4

Distribution of FY '76 Early Childhood Activities, According to Major Research Focus

	Child Development	The Family	Broader Social and Physical Environment	Services/ Intervention Programs
Child Development	634 projects (19.3%) $32,456,741 (8.6%)	110 projects (3.4%) $7,840,056 (2.1%)	67 projects (2.0%) $4,223,928 (1.1%)	446 projects (13.6%) $51,336,457 (13.5%)
The Family	---	23 projects (.7%) $885,518 (.2%)	21 projects (.6%) $2,176,769 (.6%)	105 projects (3.2%) $6,907,248 (1.8%)
Broader Social and Physical Environment	---	---	24 projects (.7%) $1,123,262 (.3%)	97 projects (3.0%) $20,276,651 (5.3%)
Services/ Intervention Programs	---	---	---	1701 projects (51.9%) $247,932,305 (65.3%)

Note: The Panel has computerized information on 3,277 projects pertaining to early childhood ($379.5 million in funding). The above figures sum to only 3,228 projects and $375.2 million, and the percentages to slightly less than 100%, because they do not reflect 49 projects with a major focus only on research methodology.

environment. Research represented in this matrix cell accounts for an even larger proportion of the research funds expended (65.3%). The second most active area is child development, which, as indicated above, accounts for about 19% of the projects. Much of this research is basic research conducted in the laboratory. In contrast to the relatively expensive service-oriented projects, projects focused exclusively on developmental processes were allocated only 8.6% of the total funds in FY '76.

Almost no activity shows up in the other two single-system cells of the matrix. Projects focused only on the family and only on the broader environment each constitute .7% of the total number.

Thus, about 73% of the child research projects are located in two of the single-system cells. About 26% of the FY '76 research activities are distributed across the six two-system cells. Again, the distribution is uneven, with 13.6% of all projects (about half of the two-system projects) oriented toward services/programs and child development.

The next two largest clusters of research are found in the family and services cell (3.2% or 105 projects) and the broader environment and services cell (3.0% or 97 projects). Finally, there are 67 projects focusing on child development and the broader environment, and 21 projects focusing on the family and the broader environment.

Individual Agencies

Figures 5 and 6 summarize the data for the agencies. Figure 5 shows the agencies ranked according to the number of projects located in each cell. Figure 6 indicates the percentage of each agency's early childhood research which is located in each cell, and the agencies are ranked accordingly. Thus the first figure indicates differences in the absolute amount of activity supported by the agencies, while the second indicates different emphases within the agencies. For instance, looking at the child development cells in the two figures, we see that NICHD, which is mandated to support basic research on the processes of human development, is ranked highest in both cases. That is, this agency supports a large number of projects on child development relative to other agencies, and these projects

Figure 5

FY '76 Early Childhood Research, by Agency (Number of Projects)

	Child Development	The Family	Broader Social Environment	Services/ Intervention Programs
Child Development	NICHD 276 NIMH 168 NINCDS 62 NIE 41 OE 29 USDA 26 BCHS 16 OCD 7 NIDA 5 NIAAA 2 RSA 1 NCES 1 12 agencies	NIMH 46 NICHD 24 OCD 17 USDA 8 BCHS 4 OE 3 NIAAA 2 NIE 2 NIDA 2 RSA 2 10 agencies	NIMH 27 USDA 14 NIE 12 NICHD 5 OCD 4 NCES 3 NIDA 1 BCHS 1 8 agencies	OE 227 NIMH 54 NIE 43 NICHD 38 OCD 24 BCHS 17 NINCDS 17 NIDA 12 USDA 8 NIAAA 3 RSA 2 NCES 2 12 agencies
The Family		NIMH 14 OCD 4 NICHD 2 USDA 1 BCHS 1 NIAAA 1 6 agencies	OCD 9 NIMH 7 USDA 3 DOL 1 NIE 1 5 agencies	OE 51 OCD 28 NIMH 16 BCHS 3 NICHD 3 SRS 2 NIE 1 NCES 1 8 agencies
Broader Social and Physical Environment			NIMH 7 USDA 7 NIE 5 NIDA 3 NCES 2 5 agencies	NIE 47 NIMH 21 OE 8 OCD 6 USDA 4 BCHS 3 NCES 3 NIDA 3 LEAA 2 9 agencies
Services/ Intervention Programs				OE 1284 NIE 181 OCD 110 NIMH 28 SRS 20 NCES 18 BCHS 15 LEAA 9 NIAAA 9 USDA 8 NIDA 7 NICHD 6 NINCDS 3 DOL 2 RSA 1 15 agencies

Figure 6

FY '76 Early Childhood Research, by Agency (Percentages)

	Child Development	The Family	Broader Social Environment	Services/ Intervention Programs
Child Development	NICHD 78 NINCDS 75 NIMH 43 USDA 33 BCHS 26 RSA 17 NIDA 15 NIAAA 12 NIE 11 OCD 3 NCES 3 OE 2 12 agencies	RSA 33 NIAAA 12 NIMH 12 USDA 10 OCD 8 BCHS 7 NICHD 7 NIDA 6 NIE 1 OE <1 10 agencies	USDA 18 NCES 10 NIMH 7 NIDA 3 NIE 3 OCD 2 BCHS 2 NICHD 1 8 agencies	NIDA 36 RSA 33 BCHS 28 NINCDS 21 NIAAA 18 NIMH 14 OE 14 NIE 12 OCD 11 NICHD 11 USDA 10 NCES 10 12 agencies
The Family		NIAAA 6 NIMH 4 OCD 2 BCHS 2 NICHD 1 USDA 1 6 agencies	DOL 33 USDA 4 OCD 4 NIMH 2 NIE <1 5 agencies	OCD 13 SRS 9 BCHS 5 NIMH 4 OE 3 NCES 3 NICHD 1 NIE <1 8 agencies
Broader Social and Physical Environment			USDA 9 NIDA 9 NCES 7 NIMH 2 NIE 1 5 agencies	LEAA 18 NIE 13 NCES 10 NIDA 9 NIMH 5 USDA 7 BCHS 5 OE 1 7 agencies
Services/ Intervention Programs				SRS 91 LEAA 82 OE 80 DOL 67 NCES 60 NIAAA 53 OCD 51 NIE 50 BCHS 25 NIDA 21 RSA 17 USDA 10 NIMH 7 NINCDS 4 NICHD 2 15 agencies

represent a major portion of its total early childhood research effort. In contrast, NIE, which supports a relatively large number of projects on early childhood, is ranked fourth highest in number of projects on the developmental processes, but this number represents a relatively small proportion of its total research effort.

The same general pattern which was apparent in Figure 4 in terms of numbers of projects, shows up in Figures 5 and 6 in terms of numbers of agencies. The projects which focus only on services or intervention programs are supported by 15 agencies. Twelve agencies fund projects which focus only on developmental processes, and 12 agencies fund research focused on both of these systems. On the other hand, only 5 agencies support projects focused on both the family and the broader environment, and only 8 agencies have projects focused on both the family and services.

The Symposium on Ecological Approaches to Research on Children

The work statement and matrix which has been distributed should be helpful to agencies as they devise their research plans and should facilitate discussion among Panel members and specialists in child development research, both within and outside the Federal government. The Symposium on Ecological Approaches to Research on Child Development, held in September, 1976, was one such effort to encourage discussions among Panel members and outside specialists. The general charge to the participants was to clarify the requisites, limitations, and potential of the ecological approach to research on child development. What does it have to offer that other approaches lack? What theoretical, methodological, and analytical innovations does it require? To which aspects of the child's development and to which social issues can it be applied most effectively? In which specific areas of research is it most needed? The more specific task of the symposium was to refine and extend the matrix of research issues so that it provides a better mechanism by which to identify and coordinate ecological research activities which fall within the interests and mandates of the various member agencies.

The conference began with introductory remarks by Dr. Edith Grotberg, the Panel chairperson, and with a keynote address by Dr. Urie Bronfenbrenner, Cornell University, on the experimental ecology of human development. The remaining portion of the program was divided into three round-table discussions which focused on: (1) ecological research--theoretical considerations; (2) ecological research--methodological considerations; and (3) research directions--past, present, and future. Six representatives of the Interagency Panel and ten invited research and policy experts from around the country served as resource persons for these discussions. (See Appendix D.) In addition, a large number of persons from the Interagency Panels, Federal agencies, universities, and other institutions attended the Symposium and participated in the discussions. The proceedings of the conference (Hertz, 1976) can be obtained from the Social Research Group at The George Washington University.

The major points raised in the round-table discussion are presented below. (Specific areas in need of increased research identified during the Symposium discussions have been incorporated into the lists of research issues presented in the preceding section of this chapter.) No formal recommendations were issued by the participants, and the points reviewed here represent opinions expressed by those who were present. Some points were agreed upon by a large number of persons, while others were expressed by only one or two individuals.

Summary of Major Points Raised in the Symposium

1. A shift in emphasis is needed from assessing changes in outcome measures, to identifying intervening processes. Several aspects of this issue are identified:
    a. The static concept of social class typically used in research and theory should be set aside, and researchers should instead investigate the specific circumstances that confront families and children, with special attention to changes in these circumstances over time.
    b. A particular condition or change in conditions can lead to many outcomes.
    c. Efforts should be made to determine the relationships and behaviors that actually occur in the situations in question.
    d. Carefully designed, thorough research should be undertaken on small samples of children.
    e. More careful formulation of research questions is necessary, and graduate students should be trained in this area as well as in the more traditional areas of theory and methodology.
2. Time is an important dimension in ecological research.
    a. Researchers need to be sensitive to the historical dimension of social contexts.
    b. More support should go to longitudinal research, in lieu of research which relies on predictive tests.

   c. There is a need for temporal concepts of the child's and family's situations, and for research which examines the life course rather than particular points in time.

3. More emphasis should be placed on the child's response to environmental change, since the child's environment is rarely stable, either as a result of the mobility of the population or of changes over time in the community.
4. Child development researchers need to expand the scope of their research by addressing not only larger systems of people and settings, but also different levels of organization, such as the biological, the psychological, and the sociocultural, within each of those settings. Along the same lines, there is a need to determine how systems impinging on the child nest within other systems.
5. In moving into new areas and systems, researchers should search the literature of other disciplines for relevant concepts and findings, rather than just start from scratch.
6. Several differing views of laboratory research are expressed:
   a. Laboratory research is not outmoded, and plays an important role in developing and testing hypotheses.
   b. Laboratory research is valuable, but only insofar as it is used in tandem with real life experiments; researchers should alternate these strategies in formulating and testing hypotheses.
   c. The laboratory situation represents a perturbation of a normal environmental system, and through such contrast provides valuable information about the organism-environment relationship.
   d. There is disagreement on whether experimental precision is lost when research shifts from the laboratory to the field.
7. Judgments about the ecological validity of actual or potential situations are difficult to make; small-scale pretesting is suggested as one means of gauging the feasibility of social innovations.

8. Ecological research approaches entail changes primarily in theory, rather than method. Methods which can be used in ecological studies include traditional observational and interview techniques.

9. Several points relate to the issue of complexity in studies of ecological systems:
   a. Even very small systems of children and adults involve a large number of interactions and factors and this complexity poses serious analytical problems.
   b. It is suggested that the orientation of the field of child development is changing, and that researchers are not as prone to reject problems simply because they are too complex or cannot be broken down into convenient units of analysis.
   c. Changes in available statistical techniques may be necessary, if they are to be applied to the analysis of complex systems.
   d. It is argued that the complexity of a system cannot be determined simply by counting the number of variables involved.
   e. The complexity of systems analysis presents a dilemma: If you try to circumvent the complexity by taking out a little piece of the system at a time, you are abandoning the systems concept, but if you undertake a holistic analysis, you are stuck with the multitudinous parts and their relationships. There is a need to develop simplification strategies by which systems can be efficiently investigated without being destroyed in the process.

10. Ecological research, like all other kinds of research, may pose some risk to the population on which it focuses. It is argued that there has to be a trade-off between risk and the improvement of the human condition, and that scientists have an obligation to state this clearly to policy makers and the participants in their research.

11. More effort is needed in developing measures with ecological validity, and as a prerequisite to this more time should be spent observing behaviors in a variety of naturalistic situations.
12. Research can be made more ecological in different ways. Three options suggested are:
    a. To modify current research which focuses on the child so that it includes a larger complex of interactions;
    b. To begin at a higher level, such as the family, and work in both directions;
    c. To begin with larger policy issues, even in systems which we do not ordinarily consider as directly relevant to the child (such as housing for the elderly, or mass transportation) and work down from there to the impact on the child.
13. There is a need for programs to train researchers in ecological research approaches, at the pre-doctoral and post-doctoral levels.
14. It is not clear what impact ecological research studies would have on public policy. On the one hand, it is argued that researchers share responsibility for overly narrow formulation of social policy issues, and that ecological orientations would broaden our conceptualization of social problems and issues. On the other hand, it is argued that research findings are for the most part either irrelevant to (or too late for) policy decisions.
15. Since the time dimension is a key element of ecological approaches, a shift toward long-term research funding may be necessary.
16. Federal research funding is shaped by many factors other than the issue of contracts versus grants, and the nature of the peer review committee. These include year-to-year funding, the availability of funds, the process of setting priorities, and the nature of the agency's mission. A serious study of the ecology of research funding is a necessary step in developing new strategies for research.

17. It is recommended that more Federal research funds be allocated to conferences and other kinds of group and individual efforts to support conceptual developments relating to the systems area.

18. As a means of facilitating conceptual advances, it is recommended that support be given to the collation and synthesis of scientific knowledge across disciplines and areas of research.

19. There is a disagreement with regard to the source of resistance in moving university departments toward research activities that focus on real-life situations. On the one hand, it is argued that Federal agencies are not reluctant to support ecological work, but that the reward system of the universities and professional organizations discourage this kind of research, attributing it a low status. On the other hand, it is argued that if funds were specifically allocated for ecological research, the situation would change rapidly.

CHAPTER III

AN ANALYSIS OF THE OVERALL FY '76 FEDERAL EFFORT IN EARLY CHILDHOOD RESEARCH AND DEVELOPMENT

This chapter provides a picture of all of the early childhood research supported in FY '76 by the Federal agencies represented on the Interagency Panel on Early Childhood Research and Development. For the Panel's purposes, early childhood is defined as prenatal through nine years of age. The data described in this chapter are derived from the Interagency Panels' Information System, which contains information about 4,406 projects active in FY '76, accounting for $459,499,143 in funding. Not all of these projects pertain to the early childhood age range, however, since the information system, which is shared by the Early Childhood Panel and the Adolescence Panel, covers research spanning the age range from prenatal to late adolescence. Children nine years or younger are involved in 3,277 projects, funded for $379,543,740. Of course, many of these projects also involve children older than nine years; only 1403 projects focus exclusively on children nine years or younger. In the remaining portion of this report, the more inclusive method of figuring early childhood activity will be used. Thus, 3,277 and $379.5 million are used as the denominators in computing the percentages shown in the tables and figures in this chapter.

The Agencies

The FY '76 Federal research (prenatal through adolescence) included in the Panels' Information System is supported by 26 departments, agencies and divisions of agencies, as listed in Table 1. This table indicates the number of projects and amount of funding for each department or agency (including nine subdivisions of the Office of Education). The amount of activity ranges from 3 projects ($30,701) for ASPE, to 2,036 projects ($244,609,235) for OE. It is not particularly helpful to talk of an average project cost across all agencies, since projects vary considerably in the funds allocated, both within and across agencies. Some FY '76

Table 1

FY '76 Federal Research on Children and Adolescents, by Agency

Agency	Projects	Funding[a]
Total	4,406	459.5
Office of the Assistant Secretary for Planning and Evaluation (ASPE)	3	.03
Office of Child Development (OCD)	226	28.3
Office of Youth Development (OYD)	14	1.6
Bureau of Community Health Services (BCHS)	63	5.9
National Institute of Child Health and Human Development (NICHD)	454	31.1
National Institute of Mental Health (NIMH)	618	25.3
National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)	93	9.2
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	45	1.8
National Institute on Drug Abuse (NIDA)	155	19.7
Rehabilitation Service Administration (RSA)	11	.4
Social and Rehabilitation Service (SRS)	23	4.2
National Center for Educational Statistics (NCES)	41	9.6
National Institute of Education (NIE)	459	72.8
Office of Education	2,036	244.6
Bureau of Education for the Handicapped (BEH)	429	58.1
Bureau of Elementary and Secondary Education (BESE)	298	61.4
Bureau of Occupational and Adult Education (BOAE)	227	13.1
Division of International Education (DIE)	31	1.1
Office of Bilingual Education (Title VII)	502	69.7
Office of Career Education (OCE)	48	4.8
Office of Indian Education (OIE)	204	12.3
Office of Planning, Budgeting and Evaluation (OPBE)	41	10.1
Right to Read	256	14.0
ACTION	5	.04
Department of Agriculture (USDA)	129	1.8
Department of Labor	19	1.8
Department of Justice, Law Enforcement Assistance Administration (LEAA)	12	1.3

[a] In millions of dollars.

projects received no funding, or only a few thousand dollars, and others received more than a million dollars. Research projects may account for more funds in some agencies or areas than in others. For instance, the 618 FY '76 projects reported for NIMH account for $25.3 million, whereas the smaller number of projects reported for NIE (459) account for almost three times as much funding ($72.8 million). It is important, therefore, to take both data columns into consideration when assessing levels of activity.

Table 2 presents a breakdown by agencies of FY '76 research on children. Approximately half of the early childhood projects are supported by OE. Other agencies with substantial proportions of the activity are NIMH, NIE, NICHD, OCD, NINCDS, and USDA.

Type of Funding

The 3,277 FY '76 projects are funded through various arrangements, as can be seen in Table 3, with the majority supported through grants (83% of the total number; 65% of the total funds). The majority of the grants were awarded competitively. Approximately 14% of the projects are administered through contracts, although they account for a little more than a third of all FY '76 early childhood funds. Again, competitive awards outnumber non-competitive ones. Finally, there are 75 intramural projects, and 31 projects classified as agreements.

Interpreting the Data

A few words of explanation regarding the Panel's system of classifying and coding research projects are necessary as a preface to the data. The content or focus of each project is classified in two ways. First, the major focus of the project is determined. Even if a project investigates several factors (e.g., cognitive development, socioemotional development, and day care), only the factor judged by the coder to be most central to the purpose of the study is designated as the primary focus. For projects with a significant focus on more than one factor, a single secondary focus is selected in a similar fashion. (In cases where no secondary focus is apparent, however, none is coded.) The coder chooses from a set of 7

Table 2

FY '76 Federal Early Childhood Research, by Agency

Agency	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total	3,277	(100.0)	379.5	(100.0)
Office of Child Development (OCD)	216	(6.6)	27.8	(7.3)
Bureau of Community Health Services (BCHS)	61	(1.9)	5.8	(1.5)
National Institute of Child Health and Human Development (NICHD)	356	(10.9)	23.9	(6.3)
National Institute of Mental Health (NIMH)	390	(11.9)	16.0	(4.2)
National Institute of Neurological and Communicative Disorders and Stroke (NINCDS)	83	(2.5)	8.1	(2.1)
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	17	(.5)	.7	(.2)
National Institute on Drug Abuse (NIDA)	33	(1.0)	5.1	(1.3)
Rehabilitation Service Administration (RSA)	6	(.2)	.1	(.03)
Social and Rehabilitation Service (SRS)	22	(.7)	4.2	(1.1)
National Center for Educational Statistics (NCES)	30	(.9)	8.2	(2.2)
National Institute of Education (NIE)	362	(11.0)	67.7	(17.8)
Office of Education (OE)	1,608	(49.1)	209.6	(55.2)
Bureau of Education for the Handicapped (BEH)	370	(11.3)	52.3	(13.8)
Bureau of Elementary and Secondary Education (BESE)	264	(8.1)	59.3	(15.6)
Bureau of Occupational and Adult Education (BOAE)	80	(2.4)	2.6	(.7)
Division of International Education (DIE)	23	(.7)	.8	(.2)
Office of Bilingual Education (Title VII)	431	(13.2)	59.6	(15.7)
Office of Career Education (OCE)	33	(1.0)	3.6	(.9)
Office of Indian Education (OIE)	161	(4.9)	10.3	(2.7)
Office of Planning, Budgeting and Evaluation (OPBE)	32	(1.0)	8.6	(2.3)
Right to Read	214	(6.5)	12.6	(3.3)
Department of Agriculture (USDA)	79	(2.4)	1.2	(.3)
Department of Labor (DOL)	3	(.1)	.1	(.03)
Department of Justice, Law Enforcement Assistance Administration (LEAA)	11	(.3)	1.0	(.3)

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[a] Percentage of total number of early childhood projects (3,277).

[b] In millions of dollars

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 3

Distribution of FY '76 Early Childhood Projects, by Type of Funding Arrangement

Type of Funding Arrangement	Projects No.	Projects %[a]	Funding Amt.[b]	Funding %[c]
Grant	2708	(82.6)	246.3	(64.9)
Competitive	1914	(58.4)	154.6	(40.7)
Non-competitive	568	(17.3)	75.0	(19.8)
Contract	463	(14.1)	131.8	(34.7)
Competitive	218	(6.7)	65.6	(17.3)
Non-competitive	141	(4.3)	49.4	(13.0)
Intramural	75	(2.3)	1.0	(.3)
Agreement (e.g., procurement orders)	31	(.9)	.4	(.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

general categories in designating the primary and secondary foci: (1) the developmental processes; (2) the family; (3) the broader social environment; (4) health/welfare services; (5) educational services; (6) juvenile justice services; and (7) research methodology.

After the primary and secondary foci have been determined, the coder classifies the content of the project again, but according to a much more extensive set of descriptors, numbering in the hundreds. This second set of descriptors contains the same ones used to designate primary or secondary focus, but also a large number of subcategories which fall under these general descriptors. This second set of descriptors is used to classify all aspects of the research project, regardless of whether they are major or minor factors, and there is no limit on the number of descriptors that can be used. Thus, in most of the tables that follow, the categories are not mutually exclusive. That is, a project may pertain to two (or many more) categories, such as physical development and cognitive development, and accordingly will be reflected in the figures presented for each of these categories. In such tables, the individual percentages sum to more than 100%. In a few tables, such as those reporting data on primary and secondary foci, the categories are mutually exclusive and sum to 100%.

Major Areas of Research

Table 4 provides the most succinct picture of how the FY '76 early childhood research projects are distributed across major content areas. The table shows the number and percentage of projects in which each area is the primary focus, the secondary focus, and part of the general focus. Take as an example the second row of figures, pertaining to physical development: 324 projects focus primarily on physical development, while in an additional 81 projects physical development is the second most salient factor. Overall, there are 755 projects that include physical development as a factor (either major or peripheral).

Three of the general categories (developmental processes, health and welfare services, and educational services) are broken down into subcategories. It can be seen that the figures shown for the subcategories do not sum to the figures shown for the general categories. The first and second

Table 4

Distribution of FY '76 Early Childhood Projects, by Research Category

Category	As Primary Focus of Study No.	As Primary Focus of Study %[a]	As Secondary Focus of Study No.	As Secondary Focus of Study %[a]	Included in General Focus of Study No.	Included in General Focus of Study %[a]
The Developmental Processes	747	(22.8)	590	(18.0)	2,012	(61.4)
Physical Development	324	(9.9)	81	(2.5)	755	(23.0)
Cognitive Development	247	(7.5)	213	(6.5)	1,208	(36.9)
Socioemotional Development	104	(3.2)	128	(3.9)	991	(30.2)
The Family	82	(2.5)	177	(5.4)	570	(17.4)
The Broader Social Environment	60	(1.8)	149	(4.5)	556	(17.0)
Health and Welfare Services	353	(10.8)	201	(6.1)	634	(19.3)
Day Care	29	(.9)	1	(.0)	54	(1.6)
Health Care	169	(5.2)	175	(5.3)	493	(15.0)
Welfare	103	(3.1)	7	(.2)	187	(5.7)
Educational Services	1,900	(58.0)	79	(2.4)	2,011	(61.4)
Special Education	359	(11.0)	12	(.4)	405	(12.4)
Early Childhood Education	87	(2.7)	11	(.3)	271	(8.3)
Elementary Education	536	(16.4)	11	(.3)	1,136	(34.7)
Secondary Education	4	(.1)	3	(.1)	484	(14.8)
Post-Secondary Education	0	(0.0)	1	(.0)	22	(.7)
Alternative Education	4	(.1)	1	(.0)	22	(.7)
Parent Education	6	(.2)	4	(.1)	195	(6.0)
Juvenile Justice Services	35	(1.1)	1	(.0)	58	(1.8)
Study of Research Methods	100	(3.1)	72	(2.2)	314	(9.6)

Note. As primary or secondary focus, categories are mutually exclusive, with the exception that a category subsumes any other categories indented immediately below it. Categories are not mutually exclusive when they refer to areas included within the general focus.

[a] Percentage of total number of early childhood projects (3277).

set of columns differ in this regard from the third set of columns. In the case of the primary focus and secondary focus columns, the subcategory figures sum to less than the general category figures. While the subcategories are mutually exclusive, the superordinate category figures include the sum of the figures shown for the subcategories plus a number of projects which were classified at a general level only. In the case of the general focus columns, the subcategories sum to more than the figure shown for the superordinate categories. The reason for this is that the categories are not mutually exclusive; a project may be counted in more than one category or subcategory.

Looking at the general focus columns on the right side of the table, we can see that the two most studied categories are the developmental processes and educational services, each of which is part of the focus of 61.4% of the early childhood projects. While the two categories are not always involved in the same studies, clearly there is substantial overlap. There is considerable difference between these two categories, however, in the extent to which they are selected as the major focus of research. When educational issues are included in the general focus of a study, they almost always are also the primary focus (in 1,900 of the 2,011 projects). In other words, if education is studied at all, it is usually the main point of study.

In contrast, only a little more than a third of the projects addressing the developmental processes do so as a primary focus (747 of the 2,012 projects). Thus, the developmental processes are studied in a large number of projects, but often within the context of a more general focus, such as the family, health and welfare services, or education. A substantial number of projects (590) have a secondary focus on the developmental processes. Note, however, that at the general category level, the same project can have both a primary focus and a secondary focus on different developmental processes (e.g., a primary focus on cognitive development and a secondary focus on physical development).

In terms of major focus (both primary and secondary), there is more research relating to physical development and cognitive development than to socioemotional development. This pattern does not hold up with regard to the general focus of research, however, with socioemotional development studied less than cognitive development, but more than physical development.

Health and welfare services are subjects of study in 634 projects, and the primary foci of 353 of these projects. Most of this research is directed at health care (including physical and mental health services) or welfare (e.g., emergency protective services, child abuse prevention and treatment, foster care and adoptive services, and advocacy services). A relatively small portion of these projects (29) pertain to day care.

As in previous fiscal years, the family is included as a factor in almost a fifth of the FY '76 Federal research on children, but is a primary focus of a much smaller proportion of studies. The family is a secondary focus, however, in 5.4% of the projects.

The figures for the broader social environment (e.g., economic factors, neighborhood environment, laws and policies, mass media, cultural and religious factors) are similar to those displayed for the family: almost a fifth of the FY '76 projects include the broader social environment, but generally as a peripheral or background variable, rather than a major focus.

Only 1.1% of the projects concern juvenile justice services. Most of the Federal activity in this area is oriented toward older children, and is described in the annual report of the Adolescence Panel.

Kinds of Research

Figure 7 provides information on the different kinds of FY '76 early childhood activity, classified as: basic research, applied research, evaluation research, policy research, demonstrations, and research support and utilization activities. The Interagency Panel Information System defines these kinds of activities as follows:

Basic research refers to research directed primarily toward the increase of knowledge, the improvement of understanding, the provision of background information, and the discovery of basic relationships. It is not necessarily applicable to solutions of immediate problems, and may include theory building.

Applied research refers to research in which results are intended to be more directly applicable to immediate problems than basic research. It

Figure 7

PER CENT OF TOTAL NUMBER OF EARLY CHILDHOOD RESEARCH PROJECTS BY KINDS OF RESEARCH, FY'76*

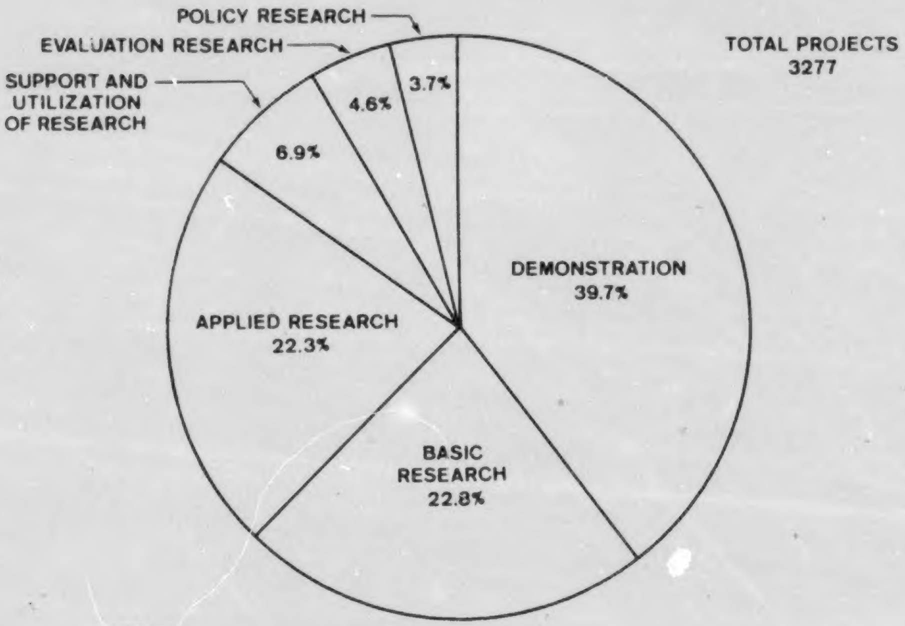
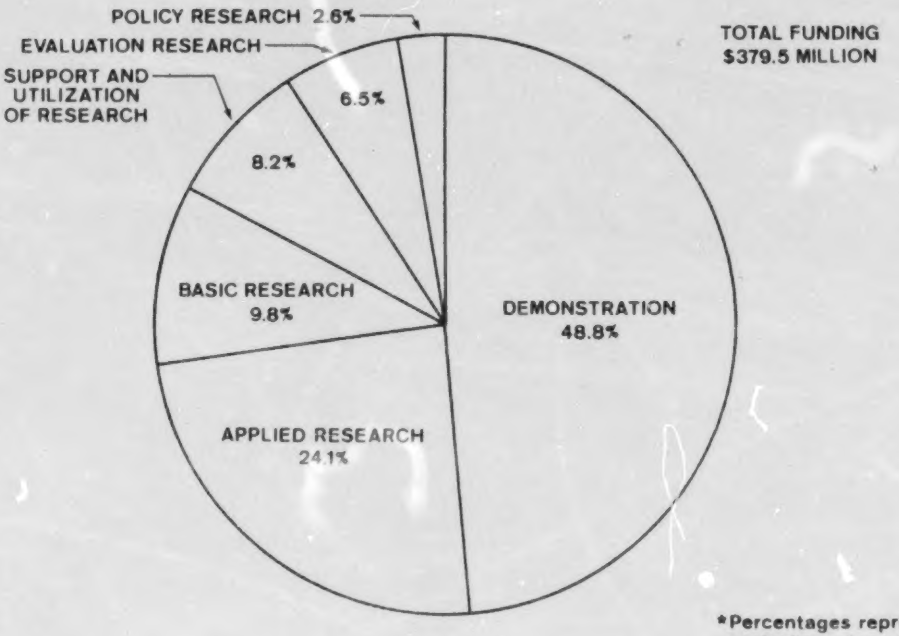


Figure 8

PER CENT OF TOTAL EARLY CHILDHOOD RESEARCH FUNDING BY KINDS OF RESEARCH, FY'76*



*Percentages represent mutually exclusive categories.

may be derived from basic research or theory or may be empirical. It may be aimed at showing how existing knowledge can be used in new and useful ways. Included with this category are the subcategories of development (the construction of tests, systems, materials, methods, media, equipment, facilities, prototypes, and models) and demonstration and/or replication (activities designed specifically to test the feasibility or effectiveness of the method of operation or applicability of a research or program model).

Evaluation research refers to research designed to determine the overall effectiveness of a broad program, projects, models, strategies, materials, methods and costs.

Policy research refers to studies of needs, goals, priorities, and guidelines, and often includes state-of-the-art papers and library research.

Demonstrations refer to projects which demonstrate the use of a model or method as a means of disseminating a previously developed and tested model. These projects must have evaluation components.

Research support and utilization activities refer to projects funded with research dollars that do not conduct basic or applied research, but support the planning or implementation or dissemination of research related to children, such as conferences, publications, and the installation of proven models.

As can be seen in the top figure, the largest portion of the projects concerns demonstrations (almost 40%). There are equivalent amounts of research classified as basic and applied (22.8% and 22.3% respectively). When the allocation of funds is considered, however, another pattern is apparent. The proportion of research classified as basic shrinks to less than 10%, while applied research accounts for 24.1% of the funds, and demonstration almost half of all the funds. Applied, basic, and demonstration activities account for more than four-fifths of the FY '76 projects. About half of the remaining projects involve the support and utilization of research, and the other half evaluations and policy studies.

Table 5 breaks down the FY '76 projects both by kind of research and general content area (based on primary focus data only). Much of the basic research focuses on the developmental processes, with some activity showing under the family, the broader social environment, and education, but only negligible amounts under the other categories. In contrast, most of the

Table 5

Distribution of FY '76 Early Childhood Projects, by Primary Focus and Kind of Research

Primary Focus	Kind of Research					
	Basic	Applied	Evaluation	Policy	Demonstration	Support
Physical Development	256 (7.8%)	58 (1.8%)	1 (0.0%)	0 (0.0%)	3 (0.1%)	6 (0.2%)
Cognitive Development	202 (6.2%)	32 (1.0%)	1 (0.0%)	1 (0.0%)	2 (0.1%)	9 (0.3%)
Socioemotional Development	86 (2.6%)	12 (0.4%)	0 (0.0%)	1 (0.0%)	2 (0.1%)	3 (0.1%)
Other General[a] Development	40 (1.2%)	24 (0.7%)	0 (0.0%)	1 (0.0%)	3 (0.1%)	4 (0.1%)
The Family	64 (2.0%)	12 (0.4%)	1 (0.0%)	0 (0.0%)	3 (0.1%)	2 (0.1%)
Broader Social Environment	43 (1.3%)	3 (0.1%)	1 (0.0%)	4 (0.1%)	1 (0.0%)	8 (0.2%)
Day Care	5 (0.2%)	3 (0.1%)	5 (0.2%)	5 (0.2%)	9 (0.3%)	2 (0.1%)
Health Services	6 (0.2%)	93 (2.8%)	21 (0.6%)	5 (0.2%)	40 (1.2%)	4 (0.1%)
Welfare	3 (0.1%)	46 (1.4%)	8 (0.2%)	3 (0.1%)	37 (1.1%)	6 (0.2%)
Other General Services[a]	0 (0.0%)	21 (0.6%)	7 (0.2%)	6 (0.2%)	13 (0.4%)	5 (0.2%)
Education	33 (1.0%)	369 (11.3%)	88 (2.7%)	91 (2.8%)	1,171 (35.7%)	148 (4.5%)
Juvenile Justice	0 (0.0%)	9 (0.3%)	7 (0.2%)	5 (0.2%)	14 (0.4%)	0 (0.0%)
Research Methods	10 (0.3%)	48 (1.5%)	10 (0.3%)	0 (0.0%)	3 (0.1%)	29 (0.9%)

Note. All categories are mutually exclusive. Percentage of total number of early childhood projects is shown in parentheses.

[a] Included in these categories are projects relating to the developmental process or to health/welfare services, but which could not be coded under a specific developmental process or a specific service, primarily because they were too general.

applied research pertains to education, and relatively little concerns the developmental processes. Substantial portions focus on health services and welfare services.

Most of the evaluations, policy studies, demonstrations and support activities relate to education (over a third of all of the FY '76 projects are educational demonstrations). These four kinds of activities are evenly distributed over the other content areas, with the exception of a concentration of demonstrations in the areas of health, welfare, and juvenile justice.

The Developmental Processes

A closer look at research on the developmental processes can be obtained from Tables 6, 7 and 8. Among the 755 projects that involve physical development within their general focus[2], considerable attention is given to physical disease, pregnancy and childbirth, and motor development. Handicapping conditions, body growth, sensory development are also studied in a substantial number of projects. The 34 projects on child abuse and neglect pertain primarily to the physical effects and symptoms of child abuse. Projects focusing on services designed to prevent and treat child abuse are not included in this particular category, but are reflected under the category of welfare services in Table 11.

Almost half of the projects relating to cognitive development (Table 7) show up under cognitive achievement or performance. As in previous years, this reflects the heavy use of achievement and aptitude tests as outcome measures in child research and programs, more than it does the direct examination of the processes of cognitive achievement. Similarly, the frequent use of tests to measure language performance accounts in part for the large proportion of research on language development. Significant levels of activity can be seen in perception, reading, learning processes, intellectual handicaps, problem solving, and memory. Lesser proportions of research concern concept formation, attention, play, creativity, and imagery.

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[2] In Tables 6-20, the data refer to the general foci of projects, and thus the categories are not mutually exclusive.

Table 6

FY '76 Early Childhood Research on Physical Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Physical Development	755	(23.0)	60.8	(16.0)
Physical Disease	208	(6.3)	14.9	(3.9)
Pregnancy and Childbirth	190	(5.8)	17.4	(4.6)
Motor Development	174	(5.3)	15.4	(4.1)
Physical Handicaps	133	(4.1)	11.6	(3.0)
Body Growth	121	(3.7)	10.0	(2.6)
Sensory Development	117	(3.6)	7.4	(1.9)
Genetics	95	(2.9)	7.6	(2.0)
Physical Characteristics	68	(2.1)	4.7	(1.2)
Nutrition	66	(2.0)	4.8	(1.3)
Pharmacology	60	(1.8)	5.6	(1.5)
Epidemiology	44	(1.3)	6.5	(1.7)
Child Abuse/Neglect	34	(1.0)	5.0	(1.3)
Drug Abuse	16	(.5)	2.2	(.6)
Accidents	7	(.2)	.3	(.1)
Alcohol Abuse	6	(.2)	.7	(.2)
Environmental Hazards to Health	3	(.1)	.1	(.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 7

FY '76 Early Childhood Research on Cognitive Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Cognitive Development	1,208	(36.9)	119.8	(31.6)
Cognitive Achievement	601	(18.3)	74.1	(19.5)
Language Development	489	(14.9)	49.6	(13.1)
Perception	205	(6.3)	15.8	(4.2)
Reading	134	(4.1)	8.4	(2.2)
Learning Processes	131	(4.0)	8.6	(2.3)
Intellectual Handicaps	129	(3.9)	10.1	(2.7)
Problem Solving	96	(2.9)	6.5	(1.7)
Memory	94	(2.9)	5.8	(1.5)
Concept Formation	62	(1.9)	4.2	(1.1)
Attention	54	(1.6)	2.3	(.6)
Play	27	(.8)	2.1	(.5)
Creativity	21	(.6)	6.4	(1.7)
Imagery	16	(.5)	1.0	(.3)
Computer Simulation of Thought	6	(.2)	.6	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 8

FY '76 Early Childhood Research on Socioemotional Development

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Socioemotional Development	991	(30.2)	96.8	(25.5)
Perception of Self	464	(14.2)	52.1	(13.7)
Attitudes	248	(7.6)	34.1	(9.0)
Emotional Development	246	(7.5)	17.5	(4.6)
Interpersonal Relationships	187	(5.7)	14.5	(3.8)
Personality	112	(3.4)	8.9	(2.4)
Motivation	81	(2.5)	7.9	(2.1)
Development of Values/Morals	50	(1.5)	5.6	(1.5)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Of the 991 projects involving socioemotional development (Table 8), about half include measures of self-concept. Children's attitudes, emotional development, and interpersonal relationships are also studied relatively frequently.

The Family

Not surprisingly, a large portion of the 570 projects on the family (Table 9) concerns parents--specifically parent-child relationships and parental behavior (182 projects and 181 projects respectively). At lower but still substantial levels, are activities relating to family health, the structure of the family (e.g., single-parent, extended family, communes, families with adopted or foster children), and child rearing. In contrast to parent-child relationships, sibling relationships are examined in a relatively small number of projects. Issues pertaining to the working mother and to work-related child care needs are not specifically identified in many research projects (6 and 10, respectively), although many more studies on the family and other domains may bear indirectly on such issues.

The Broader Social Environment

Table 10 indicates the extent to which FY '76 early childhood research involves variables relating to the circumstances, conditions, people, and institutions surrounding the child. This broader environment extends beyond the family, of course, and for the purposes of this analysis does not include specific social services or intervention programs, which are covered in the next section.

First, it is apparent that much of the research classified under this general category takes into consideration the socioeconomic status and ethnic/racial background of the children and their families. Religious factors do not figure prominently, however. The neighborhood environment is also frequently taken into consideration, with questions about the geographic location of the child's home raised in 46 projects, or a little

Table 9

FY '76 Early Childhood Research on The Family

Category	Projects No.	Projects %[a]	Funding Amt.[b]	Funding %[c]
Total Research on the Family	570	(17.4)	44.4	(11.7)
Parent-Child Relationships	182	(5.6)	13.7	(3.6)
Parental Behavior	181	(5.5)	14.7	(3.9)
Family Health	128	(3.9)	9.4	(2.5)
Family Structure	95	(2.9)	7.2	(1.9)
Child Rearing	91	(2.8)	7.0	(1.9)
Family/Society Interface	63	(1.9)	5.1	(1.4)
Physical Environment of Home	44	(1.3)	3.3	(.9)
Sibling Relationships	16	(.5)	1.1	(.3)
Child Care Arrangements	10	(.3)	2.3	(.6)
Working Mother	6	(.2)	.6	(.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 10

FY '76 Early Childhood Research on the Broader Social Environment

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Broader Social Environment	556	(17.0)	59.7	(15.7)
Socio-cultural Environment	295	(9.0)	25.1	(6.6)
Socioeconomic Status	104	(3.2)	10.4	(2.7)
Ethnic/Racial Culture	99	(3.0)	4.3	(1.1)
Religious Affiliations/Practices	7	(.2)	.8	(.2)
Neighborhood Environment	109	(3.3)	12.8	(3.4)
Geographic Location	46	(1.4)	7.7	(2.0)
Facilities, Materials and Equipment	28	(.9)	1.5	(.4)
Housing Conditions	10	(.3)	.8	(.2)
Social Problems	103	(3.1)	9.8	(2.6)
Ecological Study	99	(3.0)	6.0	(1.6)
Legal Rights and Responsibilities of Children	25	(.8)	1.8	(.5)
Economic Environment	19	(.6)	3.0	(.8)
Television	12	(.4)	.6	(.1)
Regulations and Guidelines Affecting Children	10	(.3)	.4	(.1)
Physical Environment	3	(.1)	.06	(.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

more than 1% of all projects.

Social problems (e.g., delinquency, drug abuse) are mentioned in the proposals of 103 projects. The related issue of legal rights and responsibilities of children is taken up by a smaller number of projects.

Current interest by agencies and researchers in ecological approaches is described in Chapter II of this report. A clear emphasis on examining the overall setting of children, or the child in the context of his or her physical, social, and cultural environment, is evident in 3% of all of the FY '76 early childhood projects. The physical environment per se is singled out in only three projects.

Intervention Programs and Services

An overwhelmingly large proportion of the research on services involves education (Table 11). A little more than half of the 2,011 education projects involves children in grades kindergarten through third. Preschool education is studied in far fewer projects (271), and infant education in even fewer (67).

From third grade on, the higher the grade level the less numerous the studies. It should be kept in mind, however, that due to the criteria for inclusion in this report, not all of the Federal research is shown for those grades beyond the fifth grade. The studies displayed for the higher grade levels are only those which include children in the higher grade levels and children under ten years of age. There is considerably more Federal research on secondary and post-secondary education, but it is described in the annual report for the Interagency Panel for Research and Development on Adolescence.

Two special categories of education stand out in the FY '76 early childhood research: special education and parent education. Instruction of handicapped children, both within schools or other institutions and within the home, is a focus of 405 projects, or 12.4% of all FY '76 research. In addition to the education of the child, the education of the child's parents, or of expectant parents, is a concern of 195 projects, or 6% of the FY '76 research.

Table 11

FY '76 Early Childhood Research on Intervention Programs and Services

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Education	2,011	(61.4)	282.7	(74.5)
Grades K through 3	1,100	(33.6)	172.5	(45.4)
Grades 4 through 6	776	(23.7)	103.1	(27.2)
Grades 7 through 9	470	(14.3)	66.7	(17.6)
Special Education	405	(12.4)	60.3	(15.9)
Grades 10 through 12	353	(10.8)	51.4	(13.5)
Preschool Education	271	(8.3)	25.6	(6.7)
Parent Education	195	(6.0)	18.2	(4.8)
Infant Education	67	(2.0)	5.3	(1.4)
Alternative Education	22	(.7)	1.6	(.4)
Post-Secondary	22	(.7)	1.6	(.4)
Health Services	493	(15.0)	81.2	(21.4)
Mental Health Services	246	(7.5)	53.7	(14.1)
Preventive Health Care	238	(7.3)	58.2	(15.3)
Nutrition Programs	188	(5.7)	48.0	(12.6)
Pre- and Post-natal Care	33	(1.0)	3.4	(.9)
Drug Abuse Treatment	26	(.8)	4.2	(1.1)
Alcohol Abuse Treatment and Prevention	13	(.4)	.6	(.2)
Family Planning	11	(.3)	1.4	(.4)
Welfare Services	187	(5.7)	24.7	(6.5)
Advocacy Services	78	(2.4)	8.5	(2.2)
Child Abuse Prevention/Treatment	73	(2.2)	12.3	(3.2)
Foster Care Services	35	(1.1)	3.8	(1.0)
Emergency Services	20	(.6)	2.7	(.7)
Employment Services	18	(.5)	1.9	(.5)
Adoptive Services	17	(.5)	2.1	(.5)
Income Maintenance	5	(.2)	1.0	(.3)
Day Care	54	(1.6)	5.0	(1.3)
Delinquency Treatment/Prevention	39	(1.2)	2.0	(.5)
Recreation Programs	29	(.9)	2.5	(.7)
Law Enforcement	21	(.6)	2.2	(.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

The next largest general cluster of projects pertains to health services (493 projects, or 15% of all FY '76 research). Most of this is reflected in the subcategories of mental health services, preventive health care (e.g., health maintenance through innoculations, screening, and early diagnosis of physical and mental disorders), and nutrition programs.

Many of the 187 projects concerning welfare services focus on advocacy programs (i.e., those designed to promote the well-being and rights of children, through coordination of existing community services and by acting as an advocate for improved social programs and legislation), and strategies to prevent and treat child abuse and neglect.

Educational research is broken down further in Tables 12 and 13. Table 12 shows that specific instructional techniques are identified in 1,286 projects. The two largest concentrations of research show up under individualized instruction (575 projects) and bilingual instruction (520 projects). Individualized instruction is a general category, of course, which can subsume a variety of approaches in which the curriculum is geared to each student's needs and abilities. Programmed instruction and computer-assisted instruction are classified here. Tutorial instruction is a separate category, and refers primarily to remedial activities; it is involved in 153 projects. The various other techniques listed receive attention from small numbers of projects (10 to 47).

The major kinds of curricula identified in the FY '76 research (1,675 projects) are listed in Table 13. Language arts, and in particular reading, are the most frequently cited (1,045 projects and 762 projects, respectively). Language arts includes language usage, vocabulary, spelling, composition and reading. As a category in this table, reading refers to the course material used to teach reading, whereas the smaller amount of research shown for reading in Table 7 reflects a focus on the cognitive processes that underlie reading skills.

Studied almost as frequently as reading curricula are curricula relating to mathematics (616 projects). Other traditional subject matters also show up in sizeable numbers of projects on curricula: 299 projects involve social studies, 222 involve health education, 181 involve science, and 140 involve fine arts.

Table 12

FY '76 Early Childhood Research on Education, by Instructional Technique

Instructional Technique	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Instructional Techniques	1,286	(39.2)	202.8	(53.4)
Individualized Instruction	575	(17.5)	101.0	(26.6)
Bilingual Instruction	520	(15.9)	66.6	(17.6)
Tutorial Instruction	153	(4.7)	17.1	(4.5)
Team Teaching	47	(1.4)	6.1	(1.6)
Volunteer Community Service	43	(1.3)	3.5	(.9)
Open Classroom	37	(1.1)	4.6	(1.2)
Television Instruction	36	(1.1)	13.7	(3.6)
Cross-age Teaching	32	(1.0)	2.1	(.6)
Peer Teaching	31	(.9)	3.5	(.9)
Nongraded Instruction	17	(.5)	3.4	(.9)
Voucher System	10	(.3)	.8	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 13

FY '76 Early Childhood Research on Education, by Type of Curriculum

Curriculum	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Total Research on Curriculum	1,675	(51.1)	257.2	(67.8)
Language Arts	1,045	(31.9)	174.8	(46.1)
Reading	762	(23.3)	120.2	(31.7)
Math	616	(18.8)	130.0	(34.3)
Cultural Awareness	565	(17.2)	66.4	(17.5)
Social Studies	299	(9.1)	45.4	(12.0)
Health Education	222	(6.8)	52.3	(13.8)
Science	181	(5.5)	30.7	(8.1)
Fine Arts Education	140	(4.3)	24.8	(6.5)
Career Education	104	(3.2)	14.8	(3.9)
Vocational/Technical Education	95	(2.9)	21.0	(5.5)
Physical Education	77	(2.3)	9.4	(2.5)
Education for Parenthood	58	(1.8)	6.7	(1.8)
Drug Abuse Education	31	(.9)	2.8	(.7)
Environmental Studies	22	(.7)	4.2	(1.1)
Citizenship Training	10	(.3)	1.5	(.4)
Sex Education	4	(.1)	.4	(.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Efforts to foster cultural awareness in educational situations are especially visible (565 projects, or 17.2% of all FY '76 early childhood projects). Often undertaken in conjunction with bilingual instruction, the general intent of these efforts is to develop curricula which reflect the heritage and values of various cultures, for the benefit of specific ethnic groups and all children enrolled in such classes.

As in previous years, even at this age level a significant number of projects (104) focus on curricula for career education. Many career education programs and materials are geared toward young children as well as old, to acquaint them with adult work roles and options.

Research on the Research Process

As can be seen in Table 14, 314 projects include within their general focus issues relating to research methodology. In 196 of these studies, specific efforts are planned to develop or refine measurement instruments. In the majority of these cases, the measures pertain to cognitive or physical development (59 and 47 projects respectively), although some work on socioemotional instruments is shown (28 projects).

In 78 projects, attention is given to developing or improving methods for coding or recording information about events, behavior, and settings. Innovations in statistical analysis are being undertaken in 33 projects.

Although observational techniques are used in a large number of projects (see Table 15), only 24 projects focus on methodological work relating to behavior observation.

Table 15 gives data on the use (as opposed to the study) of research designs and measures. Almost half of the FY '76 early childhood projects have a pretest-posttest design. Survey and longitudinal studies are also well represented (12% and 10.2% respectively). Table 16 indicates the distribution of longitudinal studies across the different content areas. A little more than half of the longitudinal research focuses primarily on the developmental processes.

Less frequently used are multidisciplinary approaches (3.4%), case

Table 14

FY '76 Early Childhood Research on the Research Process

Category	Projects No.	Projects %[a]	Funding Amt.[b]	Funding %[c]
Total Research on the Research Process	314	(9.6)	25.0	(6.6)
Tests & Measures	196	(6.0)	15.6	(4.1)
For Cognitive Evaluation	59	(1.8)	6.2	(1.6)
For Physical Evaluation	47	(1.4)	3.5	(.9)
For Affective Evaluation	28	(.9)	2.3	(.6)
Techniques of Classifying Data	78	(2.4)	6.1	(1.6)
Statistical Analysis	33	(1.0)	5.8	(1.5)
Behavior Observation Techniques	24	(.7)	3.9	(1.0)
Study of Research Bias	19	(.6)	1.2	(.3)
Cultural/Ethnic Bias	8	(.2)	.4	(.1)
Effect of Setting/Research Agent	7	(.2)	.8	(.2)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 15

Distribution of FY '76 Early Childhood Research, by Project Characteristics

Category	Projects		Funding	
	No.	%[a]	Amt.	%[c]
Design of Project				
Pretest-Posttest	1,482	(45.2)	$196.2	(51.7)
Survey	393	(12.0)	51.5	(13.6)
Longitudinal	335	(10.2)	30.1	(7.9)
Multidisciplinary	112	(3.4)	15.5	(4.1)
Case Study	62	(1.9)	5.5	(1.5)
Cross-Cultural	45	(1.4)	2.0	(.5)
Measure Used in Project				
Named Referenced Measure	1,015	(31.0)	131.7	(34.7)
Named Unreferenced Measure	790	(24.1)	109.1	(28.7)
Questionnaire	558	(17.0)	95.0	(25.0)
Interview	476	(14.5)	55.4	(14.6)
Observation	439	(13.4)	46.6	(12.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 16

Distribution of FY '76 Early Childhood Projects with Longitudinal Design, by Primary Focus

Category	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
All Areas Combined	335	(10.2)	30.1	(7.9)
The Developmental Process	170	(5.2)	9.3	(2.5)
Physical Development	60	(1.8)	4.3	(1.1)
Cognitive Development	43	(1.3)	1.7	(.4)
Social-Emotional Development	38	(1.2)	2.4	(.6)
Educational Services	73	(2.2)	13.8	(3.6)
Health/Welfare Services	45	(1.4)	4.3	(1.1)
Health Care	25	(.8)	1.9	(.5)
Welfare Services	10	(.3)	1.7	(.4)
Day Care	3	(.1)	.2	(.1)
The Family	25	(.8)	2.0	(.5)
Study of Research Methods	13	(.4)	.5	(.1)
The Broader Social Environment	7	(.2)	.2	(.0)
Juvenile Justice	2	(.1)	.008	(.0)

Note. Major categories and subcategories within category divisions have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

studies (1.9%) and cross-cultural strategies (1.4%). In almost a third of the FY '76 early childhood projects, the proposal names a test or measure which could be located in source books. Questionnaires are used in 17% of the projects, interviews in 14.5% and observational techniques in 13.4%.

Target Groups

It can be seen in Table 17 that 56.9% of the FY '76 early childhood projects include within their target groups children in the age range of Kindergarten through fourth grade. Three and four year olds are the next most frequently studied age group (22.6%). Infants under the age of one year are included in 16.4% of the projects, which is a higher proportion of research than that shown for children between one and three years of age--a long-standing pattern in child research.

Table 18 looks at target groups in terms of the socioeconomic status, race, and environmental setting of the children. Almost one quarter of the projects identify their target groups as including children from poverty-level families. Higher income groups are named specifically in a much smaller number of projects. Note, however, that in slightly more than 70% of the project proposals no information is provided concerning the socioeconomic status of the children involved.

The racial/ethnic backgrounds of the children and their environmental settings are also specified in only a small proportion of the project proposals. Many of the projects which specify this information intend to include minority groups within their samples. The figures for white children would be much higher were the relevant information available.

Table 19 shows the frequency with which children with special characteristics are included within the target groups of the FY '76 projects. Bilingual children are involved in almost a fifth of all of the early childhood projects. Children with a number of physically handicapping conditions are included in 12.1% of the projects; intellectually handicapped children are targeted by an equivalent proportion of the projects. More funds are allocated to projects focusing on physically handicapped children, however, than to projects for the intellectually handicapped.

Table 17

FY '76 Early Childhood Research, by Age Group

Age Group	Projects		Funding	
	No.	%[a]	Amt.[b]	%[c]
Kindergarten through Fourth Grade	1,864	(56.9)	248.7	(65.5)
Preschool (Three and Four Year-Olds)	739	(22.6)	68.7	(18.1)
Infancy	537	(16.4)	50.6	(13.3)
One to Three Years	408	(12.5)	40.7	(10.7)
Prenatal	115	(3.5)	8.0	(2.1)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects. Not reflected in this table are 958 (29.2%) of the early childhood projects, for which information on particular age ranges (other than childhood in general) was not available.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Table 18

FY '76 Early Childhood Research
by Demographic Category

Category	Projects No.	Projects %[a]	Funding Amt.[b]	Funding %[c]
Socioeconomic Status[d]				
Primarily Poor	740	(22.6)	114.3	(30.1)
Mixed Economically	289	(8.8)	53.9	(14.2)
Middle Class	109	(3.3)	7.7	(2.0)
Race or Ethnic Group[e]				
Spanish-Heritage	544	(16.6)	90.8	(23.9)
Black	337	(10.3)	43.7	(11.5)
Native American	333	(10.2)	34.3	(9.0)
White	324	(9.9)	40.7	(10.7)
Other Groups	145	(4.4)	18.6	(4.9)
American Oriental	64	(2.0)	10.6	(2.8)
Environmental Setting				
Metropolitan Area	523	(16.0)	66.2	(17.4)
Inner City	71	(2.2)	6.5	(1.7)
Suburban	53	(1.6)	5.3	(1.4)
Rural	294	(9.0)	38.7	(10.2)
Indian Reservation	153	(4.7)	11.9	(3.1)
International	54	(1.6)	3.4	(.9)
Migrant	15	(.5)	7.0	(1.8)

Note. Categories are not mutually exclusive; they have been ranked within major divisions of the table according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

[d] Does not reflect 2314 (70.6%) of early childhood projects, for which information on SES was not available or not applicable.

[e] Does not reflect 1972 (60.2%) of early childhood projects, for which information on race/ethnic group was not available or not applicable.

[f] Does not reflect 2323 (70.9%) of early childhood projects, for which information on setting was not available or not applicable.

Table 19

FY '76 Early Childhood Research on
Children with Special Characteristics,
by Category

Category	Projects No.	Projects %[a]	Funding Amt.[b]	Funding %[c]
Bilingual	594	(18.1)	77.7	(20.5)
Physically Handicapped	396	(12.1)	48.1	(12.7)
Neurologically Handicapped	141	(4.3)	12.9	(3.4)
Aurally Handicapped	137	(4.2)	9.0	(2.4)
Speech Handicapped	114	(3.5)	8.5	(2.2)
Visually Handicapped	89	(2.7)	7.8	(2.1)
Multihandicapped	88	(2.7)	22.0	(5.8)
Orthopedically Handicapped	73	(2.2)	5.5	(1.5)
Intellectually Handicapped	395	(12.1)	30.7	(8.1)
Mentally Retarded	282	(8.6)	22.5	(5.9)
Learning Disabled	167	(5.1)	12.1	(3.2)
Academically Slow	254	(7.8)	30.0	(7.9)
Emotionally Disturbed	238	(7.3)	16.3	(4.3)
Physically Ill	133	(4.1)	8.7	(2.3)
Abused/Neglected	102	(3.1)	15.6	(4.1)
Gifted	44	(1.3)	2.4	(.6)
Delinquent	41	(1.3)	3.8	(1.0)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total number of early childhood projects (3277).

[b] In millions of dollars.

[c] Percentage of total amount of early childhood funding ($379,543,740).

Trends in Early Childhood Research: Selected Comparisons of FY '75 and FY '76 Activities

The total number of early childhood projects included in the Interagency Panel Information System increased from 2,657 (funded for $304.8 million) in FY '75 to 3,277 (funded for $379.5 million) in FY '76. This increase in the size of the data base (23% more projects, 25% more funds) is one of several factors that must be taken into consideration when figures from this FY '76 Annual Report are compared with those in the FY '75 Annual Report. Figure 9 charts the growth of the Information System from FY '73 to FY '76. The increases can reflect new research activity, but they can also reflect the addition to the Information System of continuing projects or funding sources which were not included, for one reason or another, in previous years. Thus, an increase in the number of projects within a particular area of research does not necessarily indicate a real shift in Federal emphases, but may be an artifact of the enlarged data collection effort.

Other qualifications must be kept in mind when comparing figures for the two years. Each year efforts are made to improve the coding scheme used to classify research activity for the Information System. Apparent increases or decreases in activity level which result primarily from shifts in classification procedures, rather than from actual changes in funding patterns, will be identified as such, or will not be considered at all in the following discussion.

Finally, the date for the beginning of FY '77 was changed from July 1, 1976 to October 1, 1976. The resulting three month transition period is considered, according to the official policy of OMB, as part of FY '76. Since the FY '76 figures include the additional funds spent by the agencies over the transition period, it is advisable to compare FY '76 and FY '75 activities in terms of percentages, rather than absolute numbers and dollars.

Table 20 displays the major categories used in the Annual Report analyses, and the number and percentage of projects in each of these categories for FY '75 and FY '76. The table includes only those subcategories where substantial changes in the level of activity can be seen across the two years.

It is apparent that studies which included the developmental processes within their general focus account for almost identical percentages for the two years. The proportion of studies pertaining to physical development is

Figure 9
Number of Projects in the Interagency Panel Information System between FY 73 and FY 76

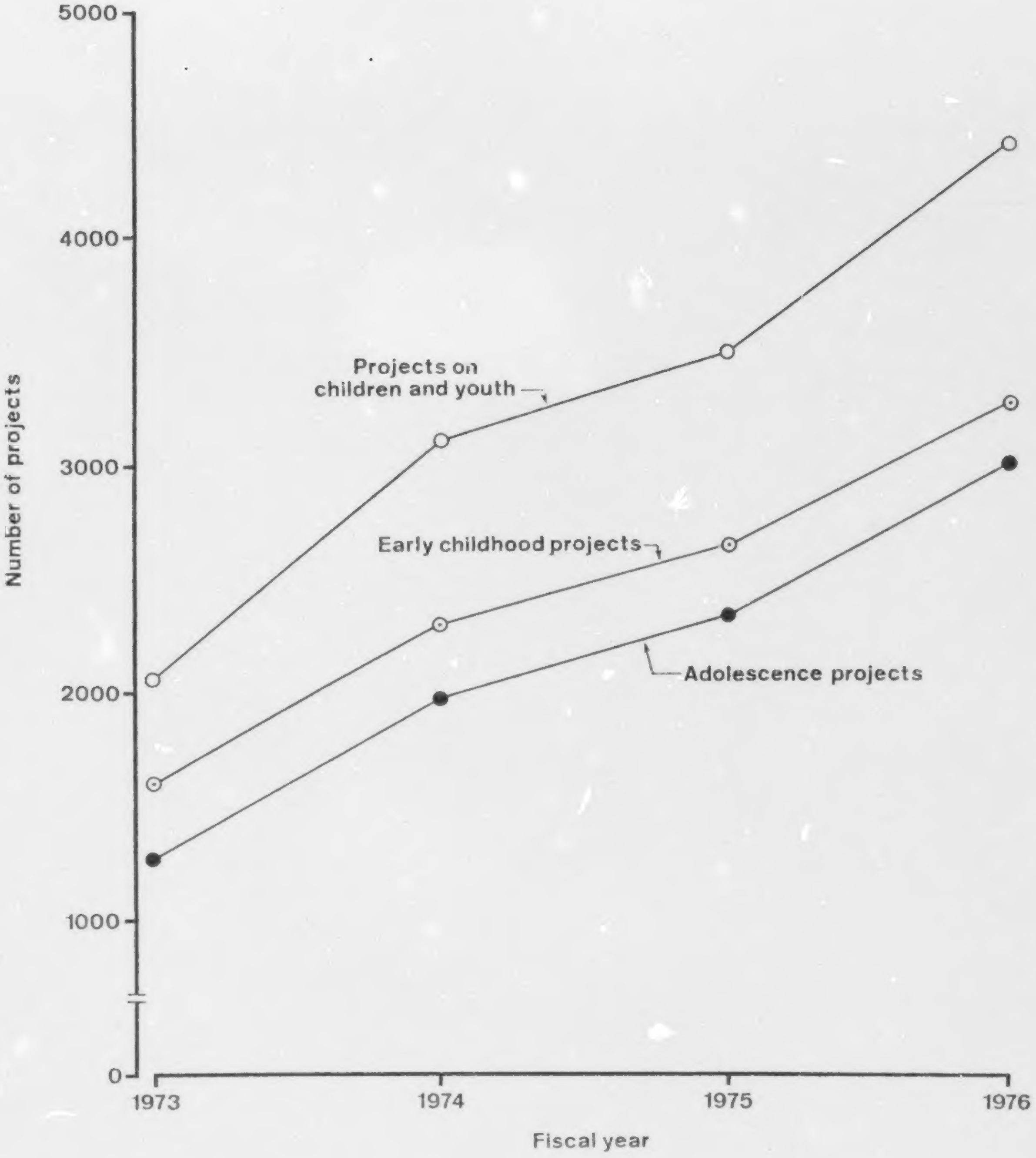


Table 20

Changes in Level of Early Childhood
Research Activity from FY '75 to FY '76

Category	No. and % of FY '75 Projects	No. and % of FY '76 Projects
The Developmental Processes	1628 (61.3%)	2012 (61.4%)
Physical Development	664 (25.0%)	775 (23.0%)
Cognitive Development	813 (30.6%)	1208 (36.9%)
Cognitive Achievement	433 (16.3%)	601 (1813%)
Language	264 (9.9%)	489 (14.9%)
Socioemotional Development	822 (30.9%)	991 (30.2%)
The Family	520 (19.6%)	570 (17.4%)
The Broader Social Environment	409 (15.4%)	556 (17.0%)
Education	1619 (60.9%)	2011 (61.4%)
K-3	781 (29.4%)	1100 (33.6%)
4-6	505 (19.0%)	776 (23.7%)
7-9	308 (11.6%)	470 (14.3%)
Bilingual Instruction	346 (13.0%)	520 (15.9%)
Curricula	1077 (40.5%)	1675 (51.1%)
Language Arts	706 (26.6%)	1045 (31.9%)
Math	422 (15.9%)	616 (18.8%)
Cultural Awareness	388 (14.6%)	565 (17.2%)
Health Services	464 (17.5)	493 (15.0%)
Nutrition	26 (1.0%)	188 (5.7%)
Welfare Services	124 (4.7%)	187 (5.7%)
Three and Four Year Olds	680 (25.6%)	739 (22.6%)
Infants	505 (19.0%)	537 (16.4%)
One to Three Year Olds	411 (15.5%)	408 (12.5%)
Bilingual Children	386 (14.5%)	594 (18.1%)

Note. Categories refer to the general focus of research, and thus are not mutually exclusive.

slightly lower in FY '76 (23%, down from 25%). No substantial changes occur in the subcategories of physical development. In contrast, cognitive development is up from 30.6% of the FY '75 research to 36.9% of the FY '76 research. The only two subcategories of cognitive development that show substantial increases, however, are cognitive achievement and language. Socio-emotional development figures indicate the same proportion of research from one year to the next.

A slight drop in the proportion of research oriented toward the family is apparent from FY '75 to FY '76. This is primarily an artifact of changes in the Panel's classification system, which involved removing parent education from the general category of family and incorporating it into the general category of education. Similarly, the increase (from 15.4% to 17.0%) apparent in the broader social environment category must be considered in the light of a classification change which involved incorporating the neighborhood/community into the general category of broader social environment. In each of the two fiscal years, neighborhood/community accounts for slightly more than 3% of the total research.

The proportion of research involving educational issues changes little from FY '75 to FY '76, although increases are evident in a number of subcategories of educational research and development. Higher percentages show up in FY '76 in three of the major grade levels: kindergarten through third grade (29.4% to 33.6%); fourth through sixth grades (19.0% to 23.7%); and seventh through ninth (11.6% to 14.3%). This last change means that in FY '76 there is a higher percentage of research on children nine years or younger, which also includes children from grades seven through nine.

The only other noteworthy changes in educational research pertain to instructional techniques and curricula. Bilingual instruction is a factor in a higher proportion of projects in FY '76 (15.9%, up from 13.0%). Curricula are studied more frequently in FY '76 (51.1%, up from 40.5%), particularly language arts (31.9%, up from 26.6%), math (18.8%, up from 15.9%), and cultural awareness (17.2%, up from 14.6%).

Health services are addressed in a slightly smaller proportion of projects in FY '76 (although in a larger number of projects), falling from 17.5% to 15.0%. The subcategory of health services showing the most substantial change is nutrition, and in contrast to the general category, it is a factor in a much higher percentage of projects in FY '76, going from 1.0% to 5.7%.

The category of welfare services shows a slight increase from FY '75 to FY '76, but little change occurs in the subcategories (such as advocacy, child abuse prevention and treatment, foster care, and emergency services).

Day care, delinquency treatment, recreation, and law enforcement are not included in Table 20, since the percentages are essentially the same for the two years.

With regard to the involvement of different target groups in research, only a few changes can be seen. Very young children (infants, one to three year olds, and three and four year olds) are included in smaller percentages of research in FY '76. Finally, bilingual children are included within the target groups of a higher proportion of research in FY '76 (18.1%, up from 14.5%). No substantial changes occur for children with other special characteristics (e.g., handicapped, gifted, abused, and academically slow) and so they are not displayed in Table 20. Similarly, no substantial changes are apparent in the socioeconomic, racial, and geographical make-up of the target groups of the research for the two years.

Summaries of Findings from Federally-Supported Research on Children and Adolescents

As indicated in Chapter I, in FY '76 the Interagency Panels decided to add to their Information System summaries of interim or final findings of the projects funded by their member agencies. Table 21 shows the distribution across research areas of the 863 projects from which information about findings has been received. It can be seen that the largest concentrations of findings summaries are available in the areas of education (574 projects), the developmental processes (149 projects) and health and welfare services (77 projects).

In contrast to information about ongoing research, which is updated only at the close of each fiscal year, findings summaries are added to the Information System throughout the year. Consequently, additional findings summaries will be available after the date of publication of this report.

Table 21

Number of Findings Summaries
Available for FY '74 and FY ' 75
Projects on Children and Adolescents,
by Primary Focus

Primary Focus	Number of Projects FY '74	 FY '75	 Total
All Areas	209	654	863
The Developmental Processes	23	126	149
Physical Development	4	24	28
Cognitive Development	9	43	52
Socioemotional Development	7	34	41
The Family	1	14	15
The Neighborhood/Community	0	2	2
The Broader Social Environment	2	14	16
Health and Welfare Services	4	73	77
Day Care	1	4	5
Health Care	2	35	37
Welfare	0	13	13
Educational Services	175	399	574
Special Education	7	62	69
Early Childhood Education	48	17	65
Elementary Education	25	144	169
Secondary Education	7	50	57
Post-Secondary Education	10	14	24
Alternative Education	0	1	1
Juvenile Justice Services	0	3	3
Study of Research Methods	4	23	27

Note. These figures reflect the findings summaries available from the Interagency Panel Information System as of February, 1977.

CHAPTER IV

AN ANALYSIS OF FY '76 EARLY CHILDHOOD RESEARCH, BY AGENCY

The FY '76 early childhood research of each agency on the Interagency Panel is described and analyzed in this chapter. A list of the agencies was presented in Table 2 in Chapter III (along with the number of FY '76 early childhood projects and amount of funding for each agency). In the pages that follow, a separate section of the chapter is devoted to each agency. In these analysis sections, which have the same general format (with some minor variations to be explained below), key data are presented concerning the agencies' FY '76 early childhood research programs.

The analysis sections begin with the figures for the agency's FY '76 early childhood projects and funding. In most agencies, information was collected on all projects which were active in FY '76. These include projects which received funds in FY '76 and projects which did not, but were still operating on funds allocated in a prior fiscal year. While the latter kind of research activity is reflected in the project figures, the funding figures shown in the tables refer only to FY '76 monies.

A concise statement of the agency's fundamental mission with respect to early childhood research and development activity is also presented on the first page of each analysis section. Note that for many agencies, the early childhood mission may constitute only a part of their overall research mission, which also may relate to adolescents and adults. Following the mission statement is a brief description of some of the salient aspects of the agency's FY '76 research program.

For some agencies, a brief description of FY '77 priorities is also presented. For the most part these descriptions are based on agency responses to a questionnaire concerning levels of interest in various research areas and approaches. Both the description of FY '76 research activity and the description of FY '77 plans were prepared by the Social Research Group staff, and do not represent official agency statements.

The remaining portion of the analysis section is tabular, beginning with a bar chart illustrating the percentage of the agency's FY '76 early childhood research pertaining to each of 36 key research areas and target groups, and a table indicating the distribution of research according to six major kinds (or purposes) of projects: basic, applied, evaluation, demonstration, research support and utilization, and policy research. When appropriate, the agency's research activity is broken down further into selected sub-categories in the following general areas: (1) physical, cognitive and socioemotional development; (2) the family; (3) instructional techniques; (4) educational curriculum; (5) handicapped children; and (6) research setting. When an agency does not support a substantial amount of activity related to one of these general areas, the table (or section of the table) is omitted. Furthermore, within each table, a sub-category is omitted if none of the agency's projects pertain to it.

Information was collected from the Department of Labor, but the data are not included in the following analysis sections because of the relatively small number of projects involved. The Department of Labor supports three projects in FY '76 in the area of childhood.

Office of the Assistant Secretary for Planning and Evaluation
Office of the Secretary, DHEW

Mission and/or Functions in Early Childhood Research:

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) serves as staff to the Secretary, DHEW. ASPE is comprised of several divisions which have specific responsibilities for the areas of health, education, income maintenance, and social services/human development. Within ASPE, primary responsibilities for childhood research and evaluation include: (1) ensuring the policy relevance and substantive merit of agency research and evaluation plans and specific projects; (2) initiating some extramural research and evaluation activities on childhood-related policy issues which cut across individual agency concerns or fall outside the current purview of any single DHEW agency; and (3) supporting in-house analyses of research and evaluation findings and literature as they pertain to particular childhood-related policy issues.

ASPE's role in carrying out its responsibilities in agency-supported research and evaluation includes both facilitating and quality assurance in the development of agency plans and projects. Members of ASPE function as professional peers, offering technical assistance and informal recommendations to agencies and their staff and encouraging interagency coordination of research and evaluation activities. In its quality assurance role, ASPE conducts a formal review of the substantive aspects of agency research and evaluation plans and projects.

Some child-related research is supported throughout the various divisions of ASPE. The primary extramural research related to children currently supported by the Division of Social Services/Human Development in ASPE includes several policy studies, concept papers and synthesis papers on day care from infancy through adolescence. These papers and studies are part of an overall departmental "Evaluation of the Appropriateness of the Federal Interagency Day Care Requirements," a report due to Congress, Summer, 1977.

Office of Child Development,
Office of Human Development
Office of the Secretary, DHEW

- FY '76 Funding of Early Childhood Research: $27.8 million
- Number of Early Childhood Research Projects Active in FY '76: 216
- Mission and/or Functions in Early Childhood Research:

The Office of Child Development advises within the Federal government on matters pertaining to the care and development of children and assists in the development of national policies and programs which have a significant impact on the well-being of children and their families. The Office develops information on problems and trends affecting child life, analyzes information on programs serving children, recommends and reviews legislative proposals in the area of early childhood development and child welfare, and provides leadership in the development of priorities and strategies for childhood research, demonstration, and experimental efforts. In addition, through such activities as the development of model legislation and standards, the provision of technical assistance, and the conduct of demonstration projects, OCD seeks to stimulate institutional changes at the Federal, State and local level in order to improve the delivery of services to children and families, particularly those children and families who are most at risk due to economic disadvantage or other vulnerabilities. Major programmatic activities conducted by the Office of Child Development are focused on meeting the developmental needs of preschool-age children from low-income families and on improving services to particular populations of vulnerable children such as the abused or neglected, children in foster care, children in need of adoptive homes, and children in institutions. OCD conducts a variety of research and demonstration activities designed to improve the quality of children's programs (e.g., day care, emergency services, etc.) and to measure their impact on the children and families served.

Description of FY '76 Early Childhood Activity

In FY '76 OCD continued to support a wide range of projects designed to focus on child welfare and development. Of these projects, 39% are considered to be applied research, although substantial effort is also devoted to both basic research and demonstrations (19% each). As in former years, areas of research which appear to be of particular importance to OCD include the family (41%) and the broader social environment (30%). Many of OCD's studies pertain to welfare services (53%), although instruction (29%) and educational curricula (21%) also are emphasized. Twenty-six percent of their projects focus on the delivery systems per se.

Parental involvement is a major component in many of these intervention programs, as is the training of qualified personnel to better serve the child. Related to OCD's concern for research on welfare services are the agency's programs targeted toward abused/neglected children (37%). The National Center on Child Abuse and Neglect continues to oversee a nation-wide network of demonstration and resource centers.

Much of OCD's research examines the actual development of the child, many times as the result of a particular intervention. This is reflected in OCD's focus on physical development (18%), cognitive development (21%), and social-emotional development (21%). It should be noted that these categories are overlapping, and one project may examine more than one of these variables.

Plans for FY '77

Appendix A shows that the Office of Child Development continues to maintain a high level of interest in the area of family research, focusing on the structure of the family, family functioning, the family's interface with society and parenting skills. Other areas which will receive high levels of agency attention are child abuse, ecological studies, preschool education and bilingual instruction. Target populations which will be emphasized are preschool age children, minority ethnic groups, bilingual and disadvantaged children. Methodological concerns will include research on development of tests and measures, program evaluation methods and methods to improve comparability. In FY '77 OCD will continue to place moderate emphasis on the study of cognitive, physical and socioemotional development, as well as the ecology of the home and the social environment.

Figure 10

Distribution of OCD FY '76 Early Childhood Research Projects, By Area of Research (N=216)

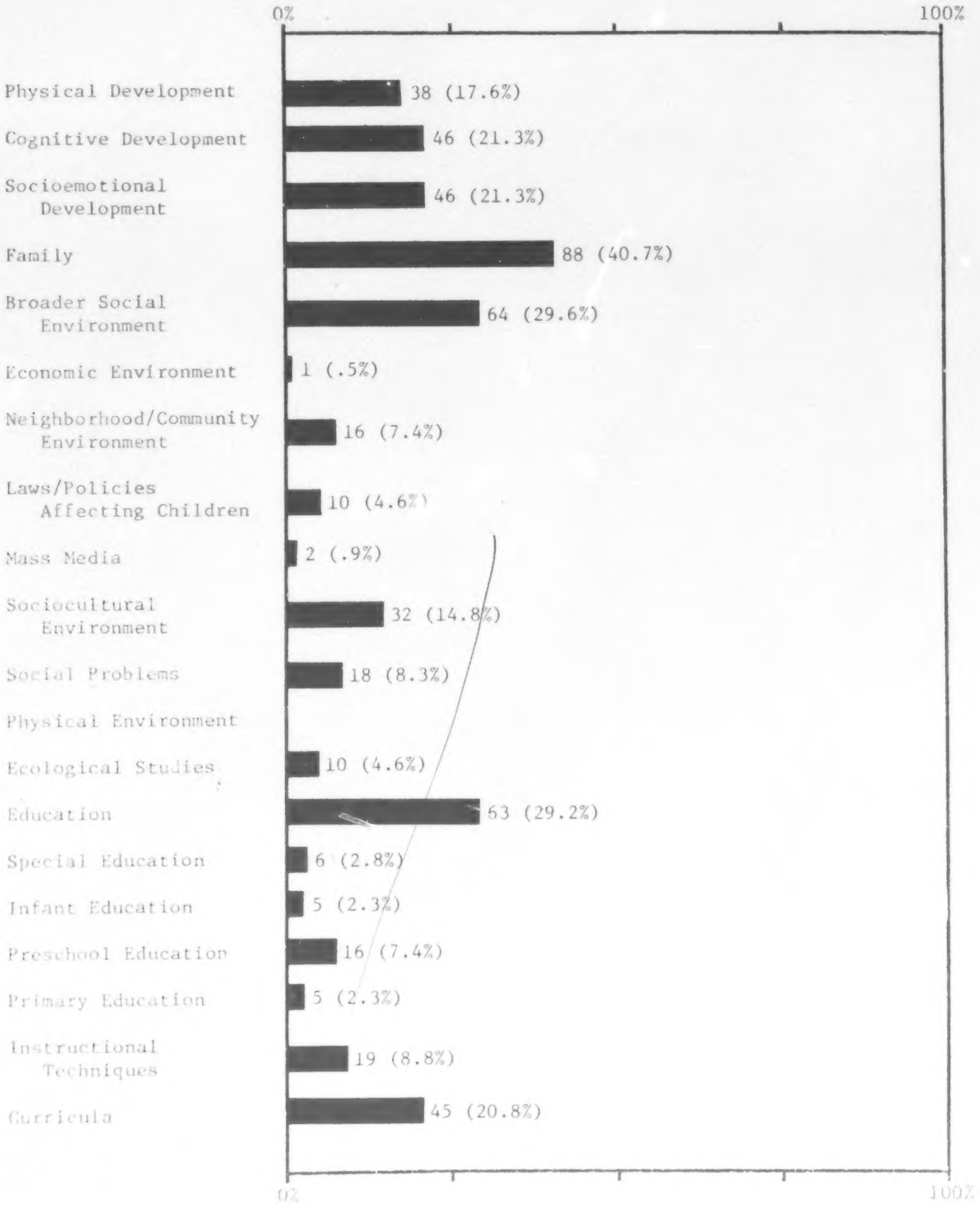
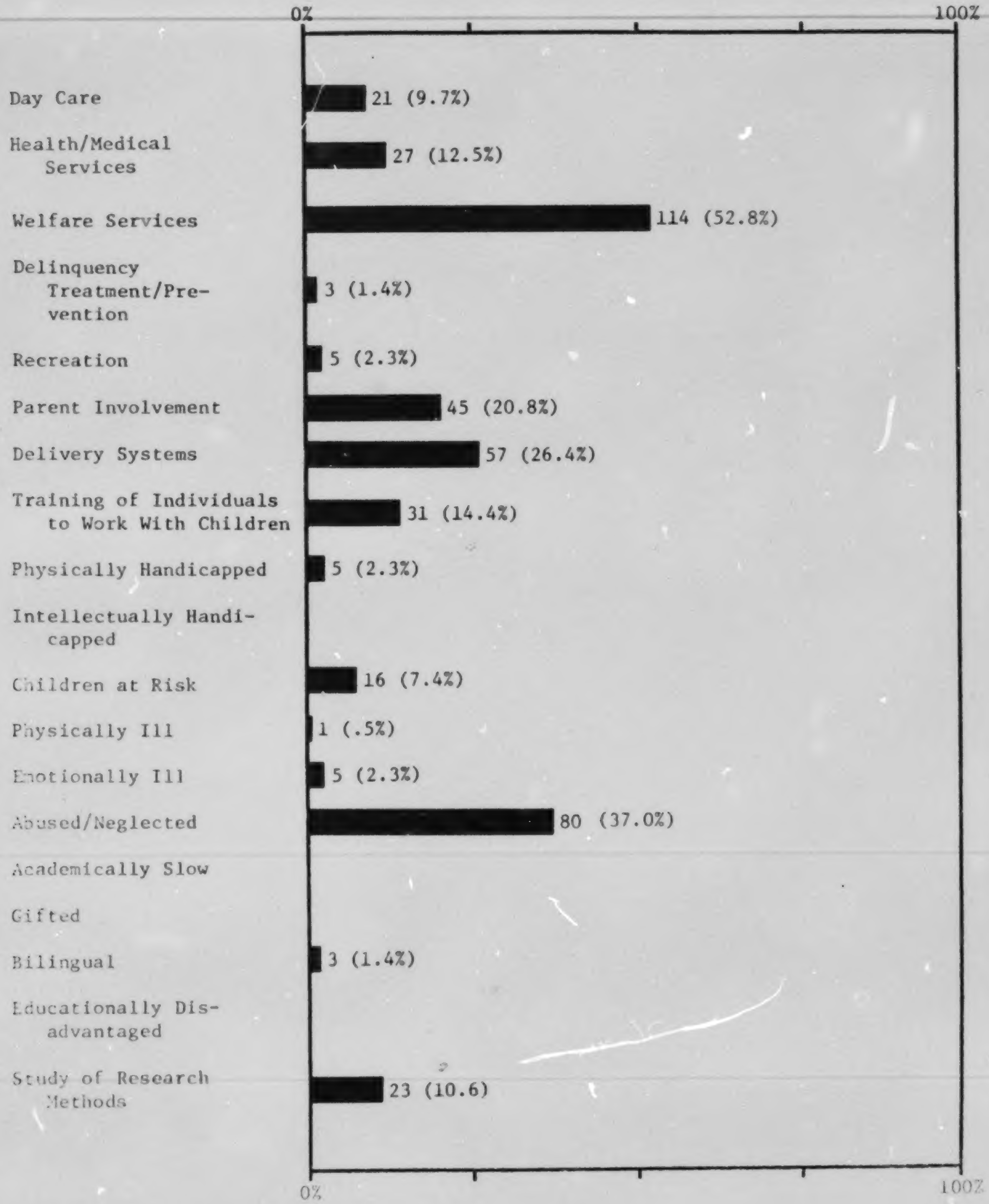


Figure 10 (Continued)

Distribution of OCD FY '76 Early Childhood Research Projects, By Area of Research (N=216)



Note. Categories are not mutually exclusive.

Table 22

Distribution of OCD FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	84	(38.9)
Basic	42	(19.4)
Demonstrations	41	(19.0)
Evaluation	22	(10.2)
Research Support and Utilization	18	(8.3)
Policy Research	9	(4.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCD FY '76 early childhood research (216 projects).

Table 23

Breakdown of OCD FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	88	(40.7)
Parental Behavior	39	(18.1)
Family Structure	31	(14.4)
Child Rearing	27	(12.5)
Parent-Child Relationships	25	(11.6)
Family-Society Interface	24	(11.1)
Physical Environment of Home	13	(6.0)
Family Health	11	(5.1)
Child Care Arrangements	5	(2.3)
Sibling Relationships	2	(.9)
Working Mother	1	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCD FY '76 early childhood research (216 projects).

Table 24

Breakdown of OCD FY '76 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	38	(17.6)
Child Abuse/Neglect	26	(12.0)
Pregnancy and Childbirth	3	(1.4)
Motor Development	3	(1.4)
Sensory Processes	3	(1.4)
Physical Disease	2	(.9)
Physical Handicaps	2	(.9)
Body Growth	1	(.5)
Nutrition	1	(.5)
Total Research on Cognitive Development	46	(21.3)
Cognitive Achievement	30	(13.9)
Language Development	10	(4.6)
Learning Processes	6	(2.8)
Perception	4	(1.9)
Problem Solving	2	(.9)
Reading	2	(.9)
Memory	1	(.5)
Concept Formation	1	(.5)
Total Research on Socioemotional Development	46	(21.3)
Emotional Development	18	(8.3)
Attitudes	14	(6.5)
Perception of Self	11	(5.1)
Interpersonal Relationships	10	(4.6)
Personality	6	(2.8)
Development of Values/Morals	5	(2.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total OCD FY '76 early childhood research (216 projects).

Table 25

Distribution of OCD FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
Home	31	(14.4)
School	25	(11.6)
Medical Clinic	23	(10.6)
Group Care Center	19	(8.8)
Community Center	17	(7.9)
Hospital	7	(3.2)
Residential Institution	3	(1.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCD FY '76 early childhood research (216 projects).

Bureau of Community Health Services
Health Services Administration
Public Health Service, DHEW

- FY '76 Funding of Early Childhood Research: $5.8 million
- Number of Early Childhood Research Projects Active in FY '76: 61
- Mission and/or Functions in Early Childhood Research:

The purpose of the Maternal and Child Health and Crippled Children's Services research grants program of BCHS is to support scientific studies that show promise of improving the operation, functioning, general usefulness, and effectiveness of health services for mothers and children.

Description of FY '76 Early Childhood Activity

IN FY '76 BCHS continued to emphasize research designed to investigate and improve the health status of mothers and children. Figure 11 displays the high percentage of research support in the areas of physical development (79%) and health services (59%). Table 28 reveals that the major focus within the physical development category is research relating to pregnancy and childbirth (43%). Body growth (20%) and physical handicaps (15%) represent additional areas of research activity. Within the category of research relating to handicapped children, the neurologically handicapped (8%) and the orthopedically handicapped (5%) are among those groups which receive the most attention. BCHS family-focused research is fairly equally distributed among the following categories: parent-child relations (15%); parental behavior (15%); and family health (13%). More than half of BCHS research is categorized as applied (57%), while some attention is given to basic research (25%) in these areas.

Plans for FY '77

In FY '77 BCHS will continue to support a high level of activity in the area of health care and medical services from the prenatal period through the preschool years. Research on child abuse prevention and services will also receive agency emphasis. Studies on the physical development of the child, especially in the areas of body growth, sensorimotor development, physical disease and physical handicaps, will continue to receive a high level of attention. In the area of intellectual handicaps, increased support is indicated. Of moderate interest to the agency will be investigations of methodology including tests and measures development, observational methods, research design and the methodology of longitudinal research.

Figure 11

Distribution of BCHS FY '76 Early Childhood Research Projects, By Area of Research (N=61)

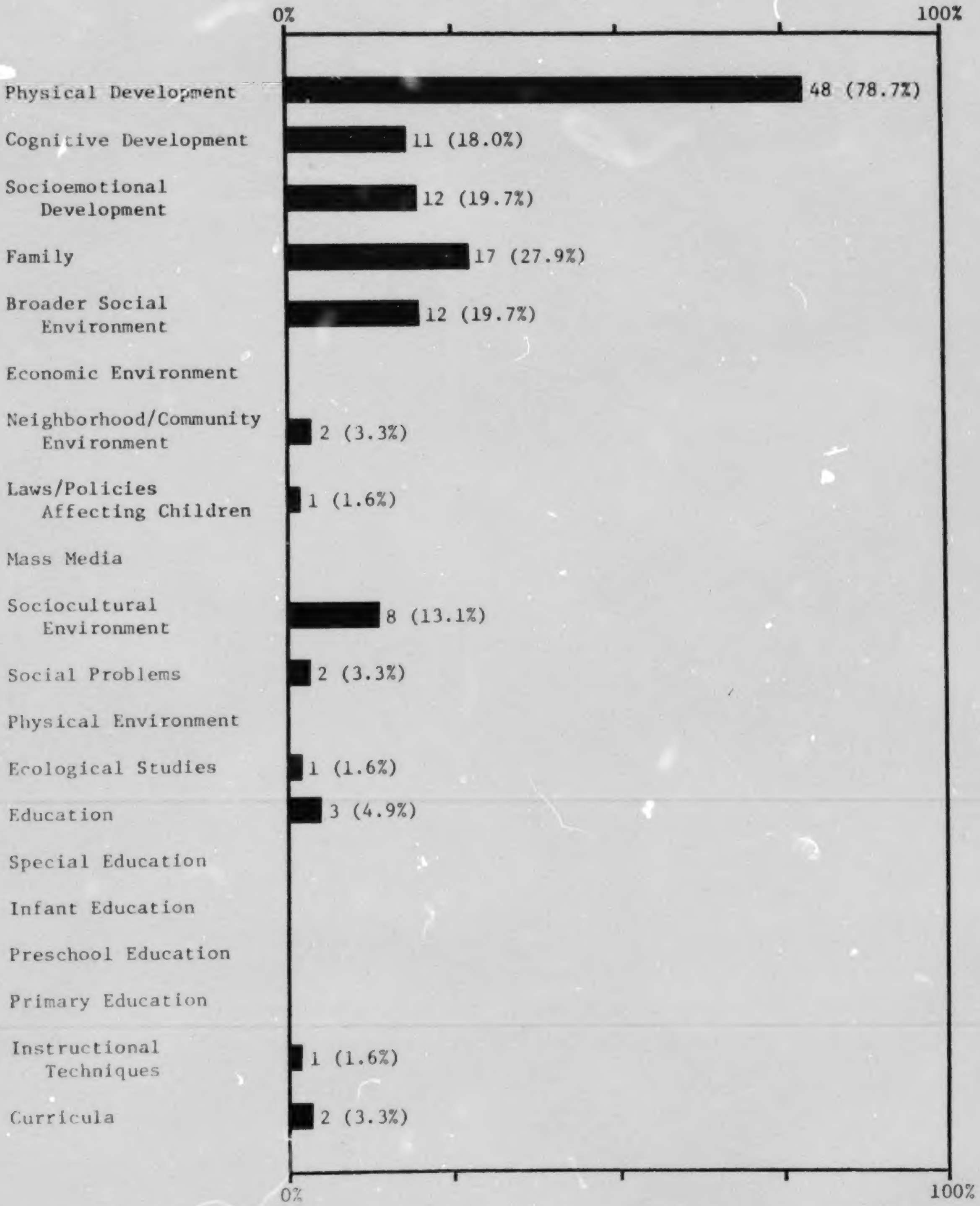
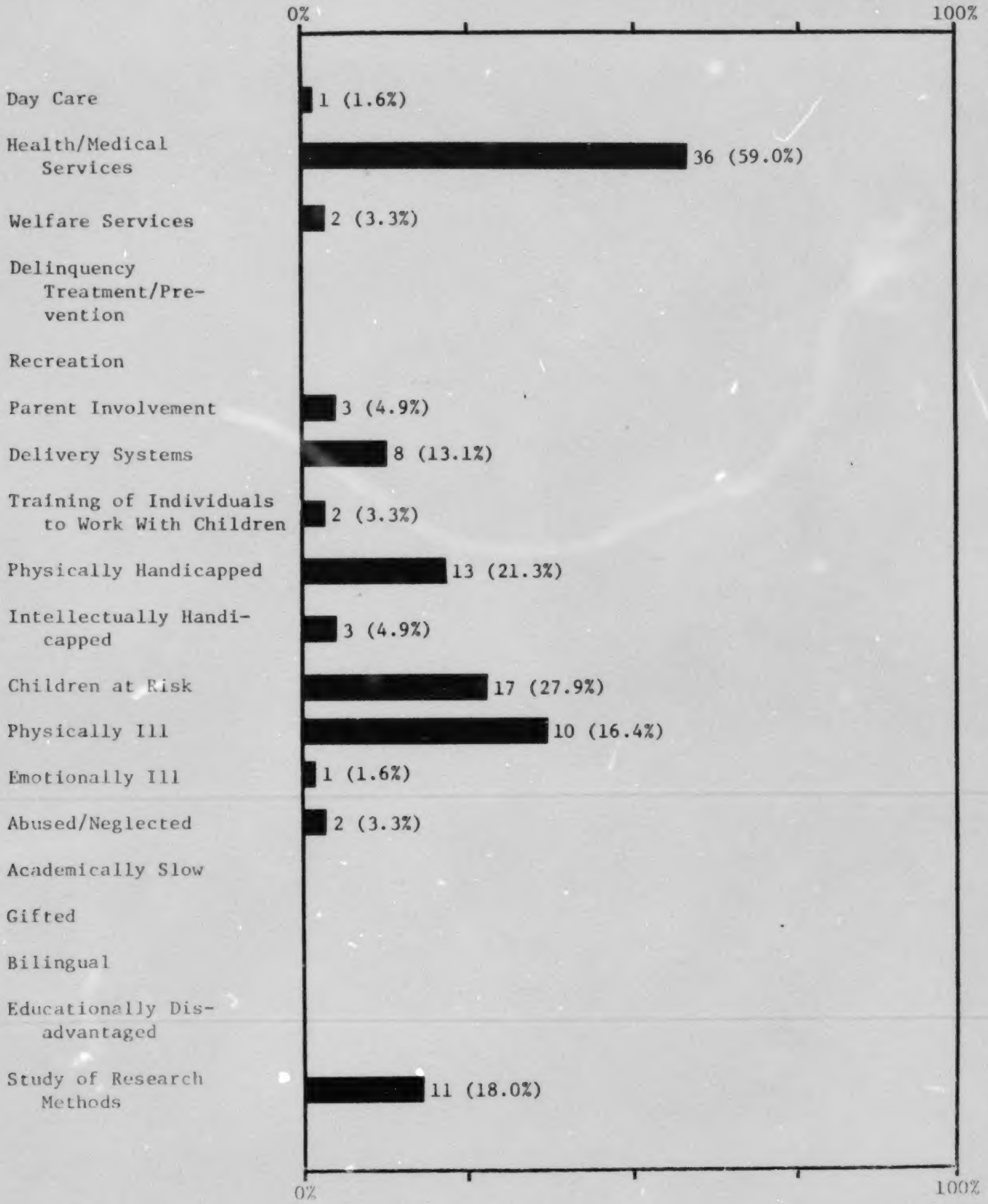


Figure 11 (Continued)

Distribution of BCHS FY '76 Early Childhood Research Projects, By Area of Research (N=61)



Note. Categories are not mutually exclusive.

Table 26

Distribution of BCHS FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	35	(57.4)
Basic	15	(24.6)
Evaluation	5	(8.2)
Policy Research	3	(4.9)
Demonstrations	2	(3.3)
Research Support and Utilization	1	(1.6)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '76 early childhood research (61 projects).

Table 27

Breakdown of BCHS FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	17	(27.9)
Parent-Child Relationships	9	(14.8)
Parental Behavior	9	(14.8)
Family Health	8	(13.1)
Child Rearing	3	(4.9)
Family Structure	2	(3.3)
Child Care Arrangements	1	(1.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '76 early childhood research (61 projects).

Table 28

Breakdown of BCHS FY '76 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	48	(78.7)
Pregnancy and Childbirth	26	(42.6)
Body Growth	12	(19.7)
Physical Disease	10	(16.4)
Physical Handicaps	9	(14.8)
Nutrition	6	(9.8)
Physical Characteristics	6	(9.8)
Epidemiology	5	(8.2)
Motor Development	4	(6.6)
Genetics	2	(3.3)
Child Abuse/Neglect	2	(3.3)
Total Research on Cognitive Development	11	(18.0)
Cognitive Achievement	10	(16.4)
Perception	3	(4.9)
Intellectual Handicaps	3	(4.9)
Attention	2	(3.3)
Language Development	1	(1.6)
Learning Processes	1	(1.6)
Concept Formation	1	(1.6)
Total Research on Socioemotional Development	12	(19.7)
Emotional Development	5	(8.2)
Personality	2	(3.3)
Perception of Self	1	(1.6)
Interpersonal Relationships	1	(1.6)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total BCHS FY '76 early childhood research (61 projects).

Table 29

Breakdown of BCHS FY '76 Early Childhood Research Projects Relating to Handicapped Children

Category	No.	%[a]
Total Research on Handicapped Children	16	(26.2)
Neurologically Handicapped	5	(8.2)
Orthopedically Handicapped	3	(4.9)
Aurally Handicapped	1	(1.6)
Speech Handicapped	1	(1.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '76 early childhood research (61 projects).

Table 30

Distribution of BCHS FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
Hospital	19	(31.1)
Medical Clinic	7	(11.5)
Home	2	(3.3)
Group Care Center	2	(3.3)
School	1	(1.6)

Note. Categories not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BCHS FY '76 early childhood research (61 projects).

National Institute of Child Health and Human Development
National Institutes of Health, DHEW

- FY '76 Funding of Early Childhood Research: $23.9 million
- Number of Early Childhood Research Projects Active in FY '76: 356
- Mission and/or Functions in Early Childhood Research:

The mission of the National Institute of Child Health and Human Development is to contribute to the good health of all citizens through efforts to understand the many factors, biological and behavioral, related to the adaptation of populations to available resources and the expansion of knowledge on family planning, child health, maternal health and human development. The primary emphasis of Institute efforts is prevention of disease and disability and the underlying assumption is that success achieved by the NICHD in assuring healthier children will produce the long range benefit of a healthier adult population for the nation.

A number of agencies within the Department of Health, Education, and Welfare carry out programs directed toward the study of populations, family planning, and improved health for mothers and children. The National Institute of Child Health and Human Development serves as a focal point, coordinator, and major research arm for these endeavors. The goals of the NICHD are accomplished through research to assure maximum health during pregnancy and infancy as well as to provide conditions for optimum development of the child so that full physical and mental potential can be attained by the adult. Interdependent with the goals are a broad understanding of social and societal environment, family structure and function, the factors affecting fertility and infertility, the dynamics of human population, and the reasonable regulation of its growth. Thus, NICHD has an interest in all problems affecting human development.

To accomplish its goals, the NICHD has developed a Center for Population Research (CPR) and a Center for Research for Mothers and Children (CRMC). The CPR has responsibility for understanding the forces affecting population growth and their social consequences, the development of contraceptive methods, and discovering the factors that determine acceptability of contraceptive methods and how these influence fertility patterns. The CRMC has responsibility to advance knowledge on societal and social environment, family relationships, pregnancy, infancy and childhood as well as to examine the problems of human development from a psychosocial and biological standpoint, with special reference to the cause and amelioration of the problems of the mentally retarded. It is responsible for understanding all factors related to the good health of mothers and children and will be concerned with health problems occurring in the earliest stages of development through adulthood.

Distribution of FY '76 Early Childhood Activity

In FY '76 NICHD continued to fund research across a wide range of biological, behavioral and clinical sciences in order to investigate the development of both normal and abnormal children and related child health issues. Figure 12 reflects the agency emphasis on the developmental processes, particularly physical development (72%), but also cognitive development (40%) and socioemotional development (15%). Table 33 shows that within the area of physical development, physical disease (37%) and pregnancy and childbirth (29%) receive the most attention. Perception (14%), cognitive performance (13%) and language development (13%) comprise the bulk of interest in the area of cognitive development, while research on social-emotional development is concentrated in the categories emotional development (5%) and personality (4%).

Research on the family (15%) as seen in Table 32 focuses primarily on parent-child relations (8%) and issues relating to family health (3%). NICHD research involves a variety of populations with handicapping conditions (see Table 34), such as the mentally retarded (26%), and the neurologically handicapped (8%).

The research program as a whole is characterized by a high level of basic research (69%), as well as a moderate level of research categorized as applied (26%).

Research in child health is administered through three branches or programs:[3] (1) Pregnancy and Infancy; (2) Mental Retardation; and (3) Growth and Development. Among the primary concerns in Pregnancy and Infancy research are the Sudden Infant Death Syndrome, low birthweight, maternal health and embryonic development.

Plans for FY '77

NICHD indicates a continuing high level of interest in the area of child health, and especially in research on nutrition, pre- and post-natal care and family planning. Cognitive development, as well, will receive a substantial amount of agency emphasis which will include research on intellectual handicaps, language, learning, thought processes and perception/attention. A moderate level of agency interest is expressed with regard to research on physical development, including the areas of body growth, sensorimotor development, physical disease and illness and physical handicaps. Socioemotional development, as well, will receive moderate agency emphasis, especially in the areas of interpersonal relationships and attitudes.

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[3] As of FY '77, there are four branches: Pregnancy and Infancy; Mental Retardation and Developmental Disabilities; Human Learning and Behavior; Developmental Biology and Nutrition.

Figure 12

Distribution of NICHD FY '76 Early Childhood Research Projects
By Area of Research (N=356)

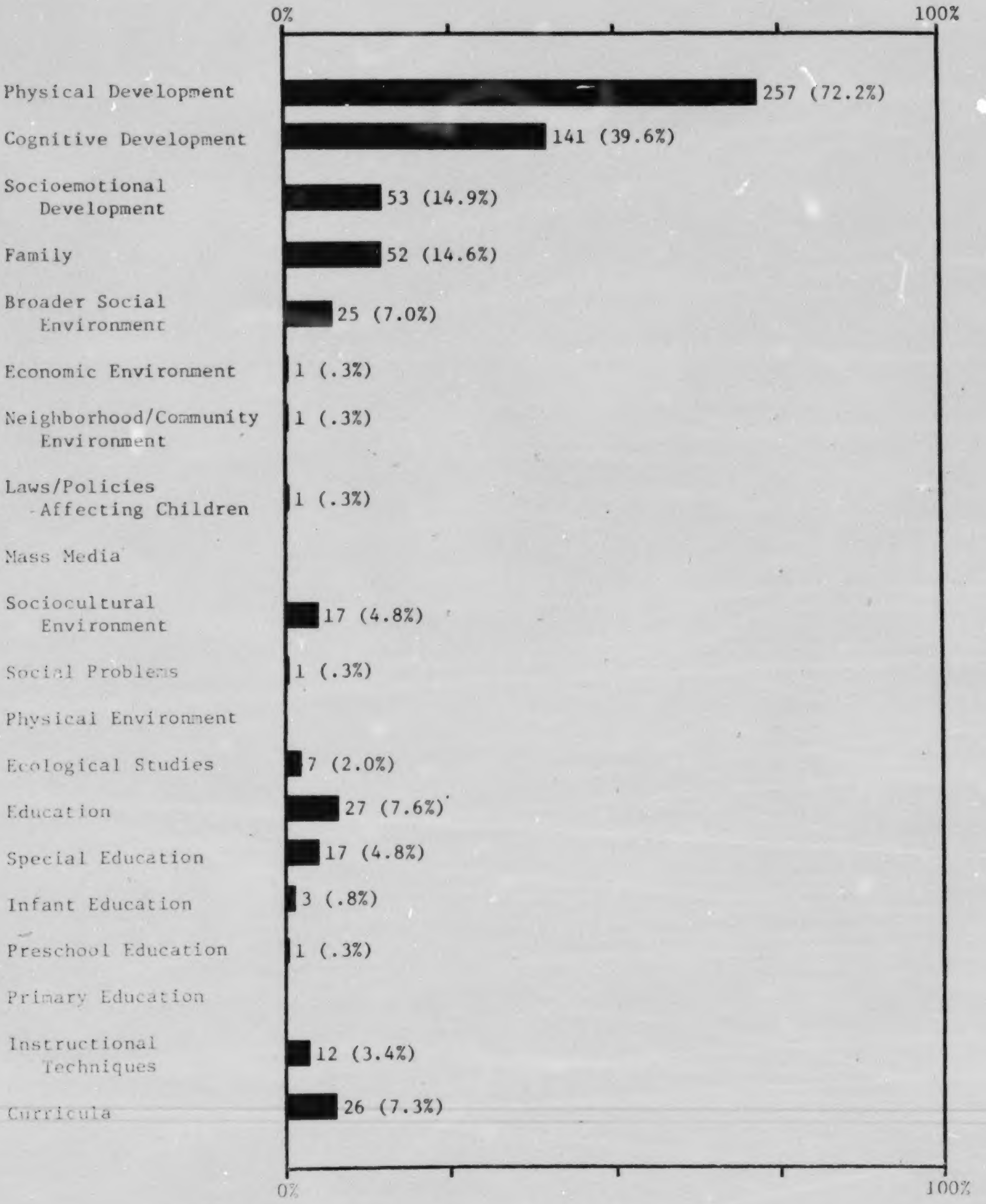
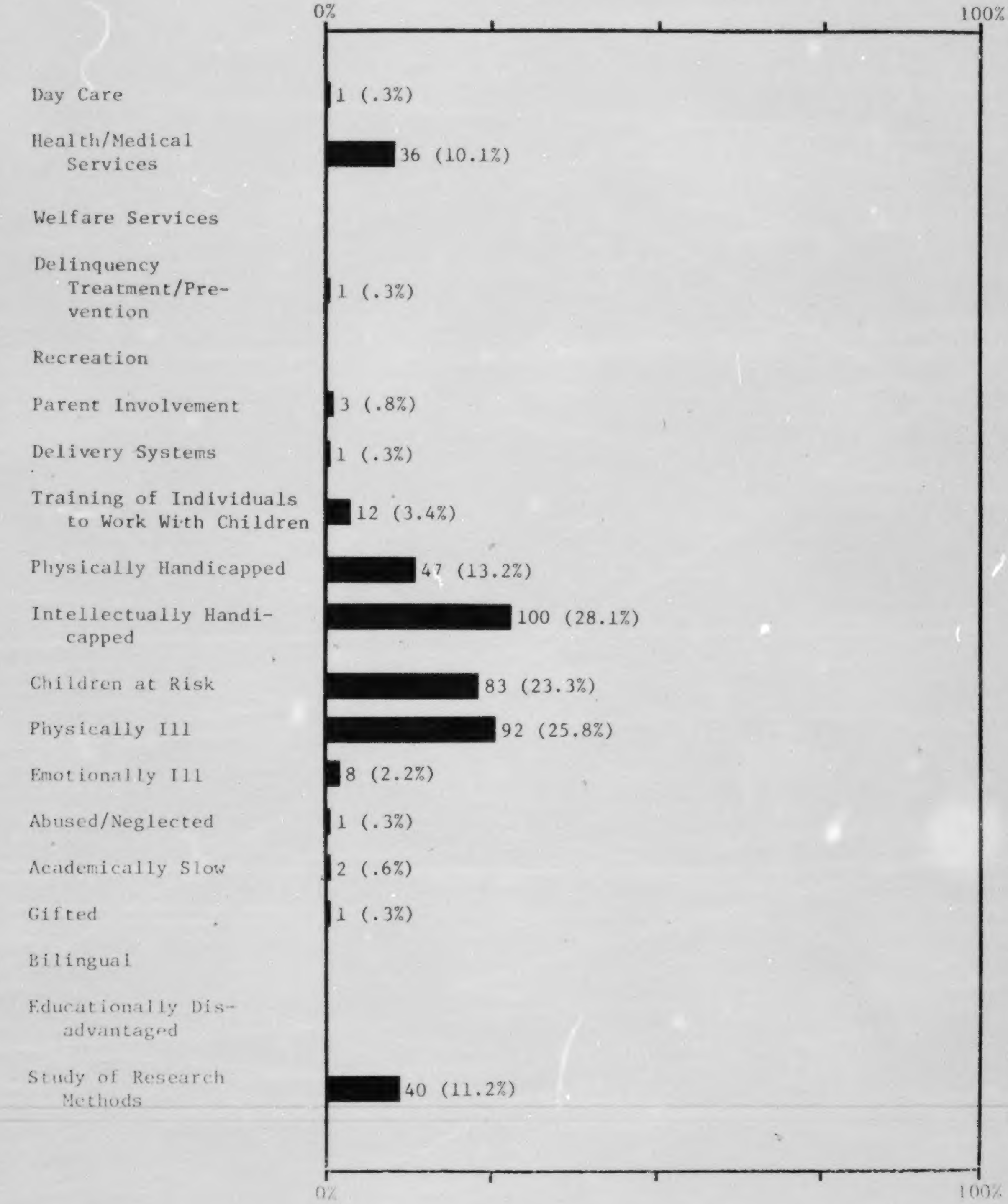


Figure 12 (Continued)

Distribution of NICHD FY '76 Early Childhood Research Projects
By Area of Research (N=356)



Note. Categories are not mutually exclusive.

Table 31

Distribution of NICHD FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	246	(69.1)
Applied	94	(26.4)
Research Support and Utilization	10	(2.8)
Demonstrations	5	(1.4)
Evaluation	1	(.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '76 early childhood research (356 projects).

Table 32

Breakdown of NICHD FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	52	(14.6)
Parent-Child Relationships	28	(7.9)
Family Health	12	(3.4)
Parental Behavior	11	(3.1)
Child Rearing	7	(2.0)
Family Structure	6	(1.7)
Physical Environment of the Home	5	(1.4)
Family/Society Interface	4	(1.1)
Sibling Relationships	3	(.8)
Working Mother	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '76 early childhood research (356 projects).

Table 33

Breakdown of NICHD FY '76 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	257	(72.2)
Physical Disease	133	(37.4)
Pregnancy and Childbirth	103	(28.9)
Body Growth	69	(19.4)
Genetics	58	(16.3)
Physical Handicaps	56	(15.7)
Sensory Processes	30	(8.4)
Epidemiology	25	(7.0)
Nutrition	23	(6.5)
Pharmacology	22	(6.2)
Physical Characteristics	20	(5.6)
Motor Development	14	(3.9)
Environmental Hazards to Health	1	(.3)
Total Research on Cognitive Development	141	(39.6)
Perception	50	(14.0)
Cognitive Achievement	47	(13.2)
Language Development	47	(13.2)
Intellectual Handicaps	37	(10.4)
Learning Processes	37	(10.4)
Memory	33	(9.3)
Attention	20	(5.6)
Problem Solving	16	(4.5)
Concept Formation	13	(3.7)
Reading	8	(2.2)
Play	7	(2.0)
Creativity	2	(.6)
Total Research on Socioemotional Development	53	(14.9)
Emotional Development	16	(4.5)
Personality	15	(4.2)
Motivation	14	(3.9)
Interpersonal Relationships	12	(3.4)
Attitudes	10	(2.8)
Perception of Self	4	(1.1)
Development of Values/Morals	1	(.3)

Note. Categories are not mutually exclusive; they have been ranked according to number of projects.

[a] Percentage of total NICHD FY '76 early childhood research (356 projects).

Table 34

Breakdown of NICHD FY '76 Early Childhood Research Projects Relating to Handicapped Children

Category	No.	%[a]
Total Research on Handicapped Children	124	(34.8)
Mentally Retarded	92	(25.8)
Neurologically Handicapped	28	(7.9)
Learning Disabled	11	(3.1)
Aurally Handicapped	8	(2.2)
Speech Handicapped	5	(1.4)
Orthopedically Handicapped	2	(.6)
Visually Handicapped	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '76 early childhood research (356 projects).

Table 35

Distribution of NICHD FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	11	(3.1)
Hospital	11	(3.1)
Home	7	(2.0)
Medical Clinic	6	(1.7)
Group Care Center	3	(.8)
Residential Institution	2	(.6)
Community Center	1	(.3)

Note. Categories not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NICHD FY '76 early childhood research (356 projects).

National Institute of Mental Health
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '76 Funding of Early Childhood Research: $16.0 million
- Number of Early Childhood Research Projects Active in FY '76: 390
- Mission and/or Functions in Early Childhood Research:

The objectives of the research program of NIMH are to provide support of research on the etiology, diagnosis, treatment, prevention and control of mental illness, and the promotion of mental health. NIMH is primarily responsible, therefore, for the support of applied, clinical and basic research aimed either at the resolution of specific problems of mental and emotional illness, or at the augmenting of knowledge regarding the parameters of human behavior--including its prediction and control. Areas of investigation are varied, spanning a continuum from the investigation of basic cognitive, personality and socialization processes, through the development of research methodologies, to study of intervention programs and other environmental influences which may affect the healthy emotional and cognitive growth of all children and may prevent or ameliorate maladaptive behaviors and socioemotional disorders of functioning. New activities and priorities include:

1. Establishment of a clinical infant project and the planned creation of a National Center for Clinical Infant Programs; the Institute is committed to expanding knowledge in the psychosocial dimensions of infant development and parent-infant relationships.
2. Intramural research into the neurobiological processes of childhood behavior disorders.
3. Special intramural and extramural efforts are newly launched to investigate depressive states and their equivalents in children as well as following the children of adults hospitalized for affective illness.

Distribution of FY '76 Early Childhood Activity

NIMH activity in FY '76 is distributed over a wide range of research areas (see Figure 13). However, there is a heavy concentration on the developmental processes. For example, socioemotional development is examined in 58% of NIMH's research, with emotional development, interpersonal relationships and personality factors being the three most frequently studied subcategories. Of these projects, almost a quarter are directed toward the target population of the emotionally ill. Exactly half of NIMH's projects examine the child's cognitive development, with particular attention given to cognitive achievement, language development and the learning processes. Physical development is studied in 31% of NIMH's research, especially the areas of motor development, pharmacology, and genetics. Fifteen percent of these projects involve handicapped children.

In addition to its focus on the developmental processes, NIMH also supports considerable research on the family (39%), and on the broader social environment (40%). Within these areas, the largest portions of research pertain to parent-child relationships and the sociocultural environment, and 12% of their projects are classified as ecological.

These concerns of NIMH are addressed primarily through basic research (60%), although an additional 26% of the projects consist of applied research.

Plans for FY '77

NIMH will continue its high level of interest in various aspects of the child's cognitive development, socioemotional development, and the family. Sociocultural influences will also be a topic of high priority, as will education and health care services. Target groups of special interest include minority ethnic groups, the disadvantaged and the intellectually handicapped. Increased emphasis is indicated for methodological issues (e.g., program evaluation methods, research design, etc.) and on issues related to research planning and dissemination activities.

On the other hand, medium or low interest levels will be maintained concerning such topics as physical development, day care, certain teaching techniques, most welfare services (including child abuse/treatment/prevention and advocacy).

Figure 13

Distribution of NIMH FY '76 Early Childhood Research Projects, By Area of Research (N=390)

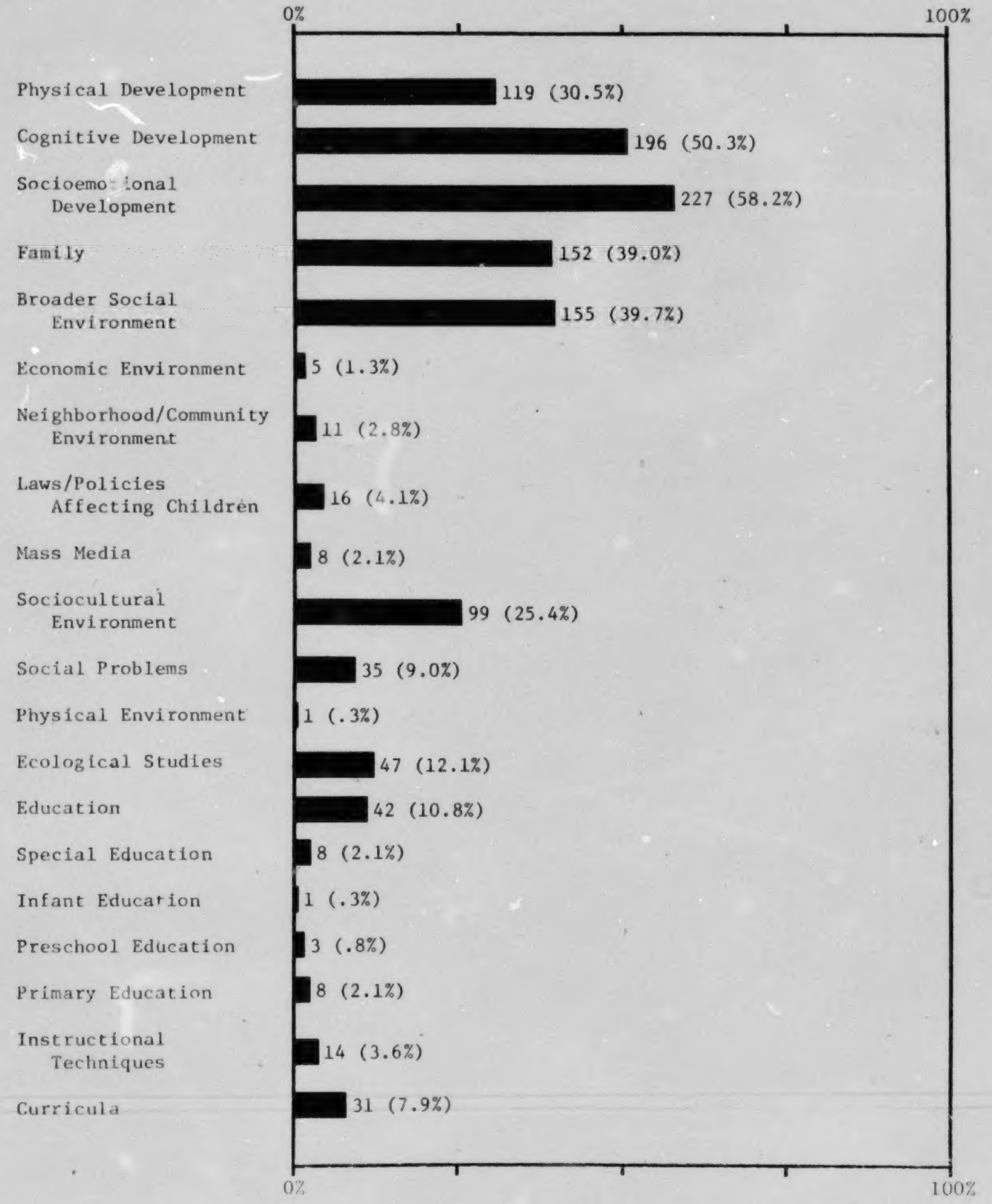
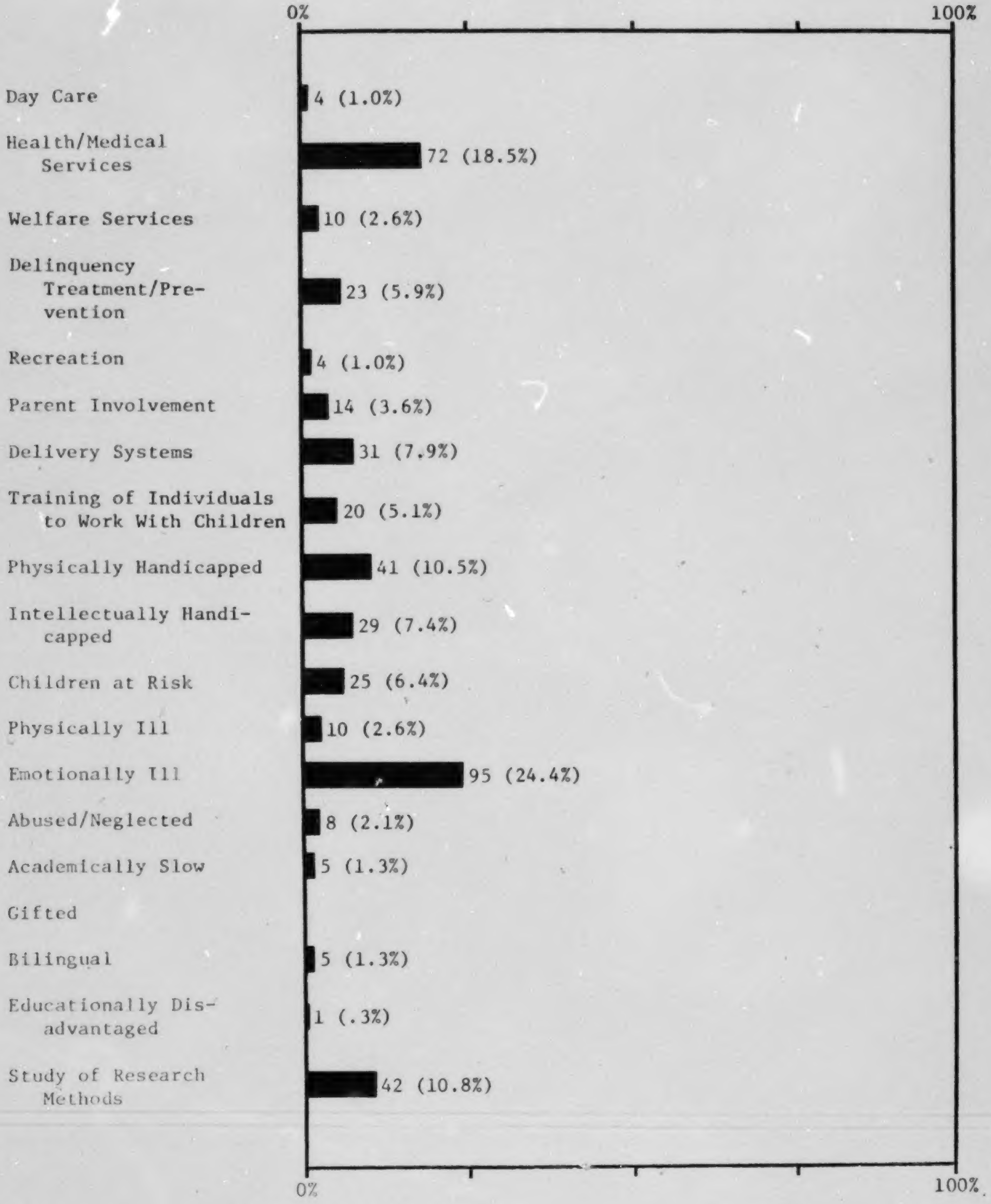


Figure 13 (Continued)

Distribution of NIMH FY '76 Early Childhood Research Projects, By Area of Research (N=390)



Note. Categories are not mutually exclusive.

Table 36

Distribution of NIMH FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	235	(60.3)
Applied	100	(25.6)
Demonstration	18	(4.6)
Evaluation	17	(4.4)
Research Support and Utilization	13	(3.3)
Policy Research	7	(1.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '76 early childhood research (390 projects).

Table 37

Breakdown of NIMH FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	152	(39.0)
Parent-Child Relationships	68	(17.4)
Family Health	47	(12.1)
Parental Behavior	41	(10.5)
Family Structure	40	(10.3)
Child Rearing	36	(9.2)
Physical Environment of Home	21	(5.4)
Family/Society Interface	14	(3.6)
Sibling Relationships	4	(1.0)
Working Mother	3	(.8)
Child Care Arrangements	2	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '76 early childhood research (390 projects)

Table 38

Breakdown of NIMH FY '75 Early Childhood Research Projects
On Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	119	(30.5)
Motor Development	29	(7.4)
Pharmacology	25	(6.4)
Genetics	24	(6.2)
Sensory Processes	22	(5.6)
Physical Disease	20	(5.1)
Pregnancy and Childbirth	17	(4.4)
Physical Handicaps	15	(3.8)
Body Growth	15	(3.8)
Physical Characteristics	14	(3.6)
Epidemiology	6	(1.5)
Nutrition	5	(1.3)
Child Abuse	3	(.8)
Accidents	2	(.5)
Environmental Hazards to Health	2	(.5)
Drug Abuse	1	(.3)
Total Research on Cognitive Development	196	(50.3)
Cognitive Achievement	96	(24.6)
Language Development	65	(16.7)
Learning Processes	50	(12.8)
Perception	42	(10.8)
Memory	31	(7.9)
Intellectual Handicaps	24	(6.2)
Problem Solving	23	(5.9)
Attention	23	(5.9)
Concept Formation	17	(4.4)
Play	9	(2.3)
Reading	7	(1.8)
Creativity	3	(.8)
Computer Simulation of Thought	3	(.8)
Imagery	3	(.8)

Table 38 (Continued)

Breakdown of NIMH FY '75 Early Childhood Research Projects
On Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	227	(58.2)
Emotional Development	147	(37.7)
Interpersonal Relationships	65	(16.7)
Personality	53	(13.6)
Attitudes	44	(11.3)
Perception of Self	42	(10.8)
Motivation	29	(7.4)
Development of Values/Morals	21	(5.4)

Note. Categories are not mutually exclusive; they are ranked according to percentage.

[a] Percentage of total NIMH FY '76 early childhood research (390 projects).

Table 39

Breakdown of NIMH FY '76 Early Childhood
Research Projects Relating to Handicapped Children

Category	No.	%[a]
Total Research on Handicapped Children	57	(14.6)
Neurologically Handicapped	32	(8.2)
Mentally Retarded	17	(4.4)
Learning Disabled	10	(2.6)
Aurally Handicapped	3	(.8)
Speech Handicapped	3	(.8)
Orthopedically Handicapped	2	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '76 early childhood research (390 projects).

Table 40

Distribution of NIMH FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
Home	26	(6.7)
School	26	(6.7)
Residential Institution	24	(6.2)
Medical Clinic	16	(4.1)
Hospital	13	(3.3)
Group Care Center	9	(2.3)
Community Center	7	(1.8)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIMH FY '76 early childhood research (390 projects).

National Institute of Neurological and Communicative Disorders and Stroke
National Institutes of Health, DHEW

- FY '76 Funding of Early Childhood Research: $8.1 million
- Number of Early Childhood Research Projects Active in FY '76: 83
- Mission and/or Functions in Early Childhood Research:

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) acknowledges a special mission to further both basic and applied research in the neurological and communicative disorders relating to early childhood. Because neurological integrity is so important to quality of life and capability for independent functioning, and because disorders in the young child can produce life-long disability and loss of independence, the impact of childhood neurological and communicative disorders is enormous both in individual and societal terms.

NINCDS has identified the following high priority research issues relevant to early childhood:

1. Neurological developmental abnormalities
   a. Cerebral palsy
   b. Mental retardation
   c. Epilepsy and other paroxysmal disorders. Experimental and clinical studies, including specific efforts with respect to absence seizures, infantile spasms, and febrile seizures and their sequelae and treatment.
   d. Autism, neurologic aspects
   e. Learning disorders. Plasticity studies, including material relevant to critical periods and deprivation syndromes, and neurological aspects of "minimal cerebral dysfunction" and learning disability.

2. Communicative disorders
   a. Auditory disorders in children, including procedures for early identification of congenital deafness, detection and treatment of disorders such as serous otitis media, and prevention of permanent hearing impairment as a result of disease or noise exposure.
   b. Aids for the communicatively handicapped. Development of improved sensory aids, etc., accompanied by assessment of costs and benefits of prototype aids.
   c. Impaired speech and/or language development. Improved detection, assessment and treatment of speech and language impairment in preschool children, including those who may also be minimally brain damaged, mentally retarded, autistic, hearing impaired, etc., but emphasizing particularly children who are primarily impaired in language development without other difficulties.

3. Congenital malformations and metabolic, degenerative, and nutritional disorders of brain, nerve, and muscle as they affect children, e.g., sphingolipidoes, muscular dystrophies, mucopolysaccharid disorders. Basic and clinical studies involving biochemistry, enzymology, morphology, genetic mechanism, and therapy.

4. Traumatic, vascular and asphyxial disorders producing neurological disability in children.

5. Viral and other infections of the developing nervous system, including slow viruses.

6. Cerebral neoplasms in children, incidence and prevalence studies.

7. The Collaborative Perinatal Project. This prospective, long-term investigation of approximately 58,000 women during their pregnancies, and the subsequent development (through age 7 or 8) of the children born of these preganncies, has completed its data collection phase. On-going data analysis and interpretation will provide extensive information concerning many of the areas listed above. Study data are being analyzed in ten primary topics: cerebral palsy, mental retardation, communicative disorders, visual abnormality, convulsive disorders, learning disorders, minimal brain dysfunction, congenital malformations, birth-weight-gestational age relationships, and neuropathology, general pathology and placentology.

Description of FY '76 Early Childhood Activity

Figure 14 reflects the agency's emphasis on research related to the physical and mental well-being of children: physical development (87%), physical handicaps (65%), cognitive development (42%), and health services (24%). Table 43 displays the distribution of research within the area of physical development: physical disease (48%), sensory process (37%), physical handicaps (27%), and pregnancy and birth (25%). Language development (23%) and perception (27%) comprise the major areas of interest within the category of cognitive development. Basic research accounts for 59% of the projects, while 36% of the research is applied.

Figure 14

Distribution of NINCDS FY '76 Early Childhood Research Projects, By Area of Research (N=83)

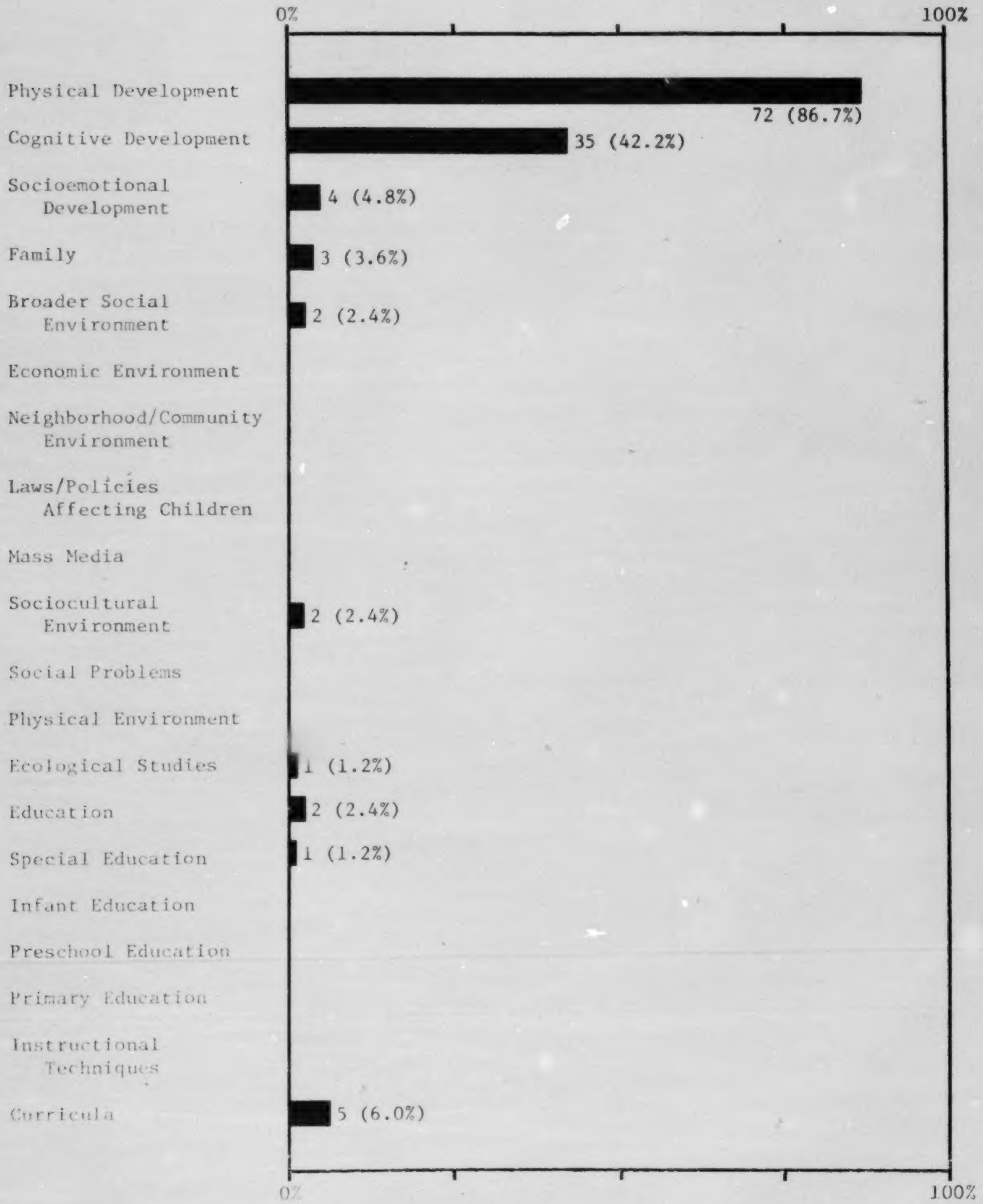
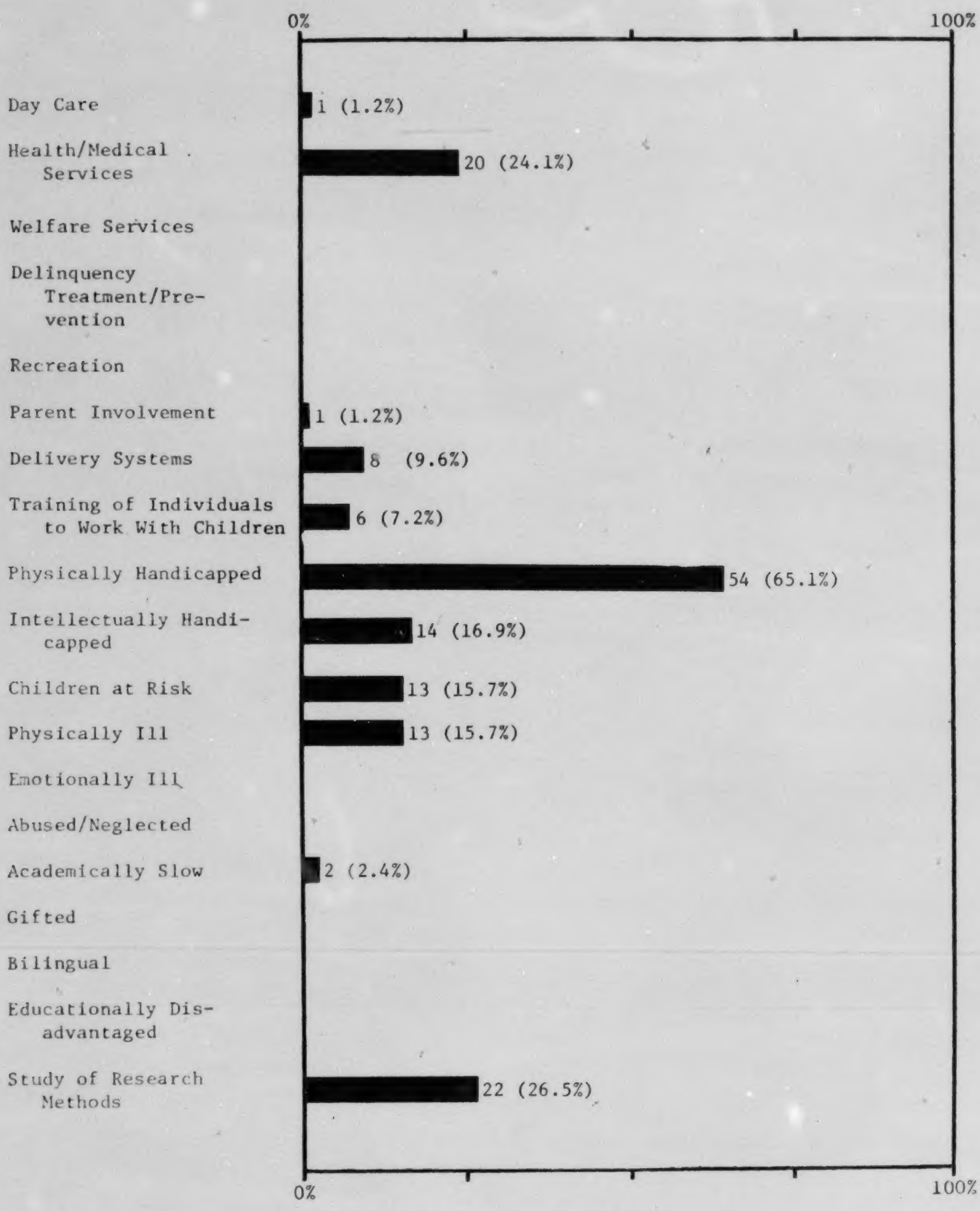


Figure 14 (Continued)

Distribution of NINCDS FY '76 Early Childhood Research Projects, By Area of Research (N=83)



Note. Categories are not mutually exclusive.

Table 41

Distribution of NINCDS FY '76
Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Basic	49	(59.0)
Applied	30	(36.1)
Demonstrations	2	(2.4)
Evaluation	1	(1.2)
Research Support and Utilization	1	(1.2)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '76 early childhood research (83 projects).

Table 42

Distribution of NINCDS FY '76 Early Childhood
Research Projects, by Research Setting

Setting	No.	%[a]
Hospital	11	(13.3)
Medical Clinic	6	(7.2)
School	1	(1.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '76 early childhood research (83 projects).

Table 43

Breakdown of NINCDS FY '75 Early Childhood Research Projects On Physical and Cognitive Development

Category	No.	%[a]
Total Research on Physical Development	72	(86.7)
Physical Disease	40	(48.2)
Sensory Processes	31	(37.3)
Physical Handicaps	22	(26.5)
Pregnancy and Childbirth	21	(25.3)
Motor Development	14	(16.9)
Body Growth	14	(16.9)
Physical Characteristics	14	(16.9)
Genetics	10	(12.0)
Pharmacology	10	(12.0)
Epidemiology	7	(8.4)
Nutrition	3	(3.6)
Accidents	2	(2.4)
Total Research on Cognitive Development	35	(42.2)
Perception	22	(26.5)
Language Development	19	(22.9)
Cognitive Achievement	11	(13.3)
Intellectual Handicaps	8	(9.6)
Memory	6	(7.2)
Reading	3	(3.6)
Learning Processes	2	(2.4)
Problem Solving	2	(2.4)
Attention	2	(2.4)
Concept Formation	1	(1.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NINCDS FY '76 early childhood research (83 projects).

National Institute on Alcohol Abuse and Alcoholism
Alcohol, Drug Abuse, and Mental Health Administration, DHEW

- FY '76 Funding of Early Childhood Research: $.7 million
- Number of Early Childhood Research Projects Active in FY '76: 17
- Mission and/or Functions in Early Childhood Research:

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) has two principal objectives: (1) to make treatment and rehabilitative services available to alcoholic people and problem drinkers by mobilizing existing resources at the Federal, state and local level and by developing a broad range of community alcoholism treatment and rehabilitative programs; (2) to pursue new methods for preventing the abuse and misuse of alcoholic beverages and the testing and evaluating of the effectiveness of these methods.

Within the Division of Prevention, research includes investigations of the impact of a wide variety of factors--social, psychological, physical, economic, legal and educational--upon people's drinking patterns. In addition, studies on the etiologies of alcoholism hope to clarify the different roles that culture, health, and quality of life play in the development of this illness. Youth have been identified as the primary target group in many of these studies. One important program direction within this division is through the Youth Education Branch. This section supports demonstration projects designed to encourage responsibility in the use of alcohol and develops and tests new youth programs for alcohol education. A second interest, channeled through the Community Prevention Branch, has as its goal the development of effective health education programs relating to alcohol abuse for the whole community population, which also include youth.

Distribution of FY '76 Early Childhood Activity

NIAAA displays a multi-pronged approach to the study and treatment of alcohol use and abuse. The primary activities, as seen in Figure 15, are directed toward the provision of intervention programs. Sixty-five percent of NIAAA's projects, for example, include the use of a drug abuse curriculum. Health care intervention programs in the form of alcohol use/abuse services are provided in 59% of the projects. Thus, it is not surprising that 65% of NIAAA research is categorized as demonstration. In most instances, evalustion of the program centers around its effect on the recipient. Alcohol use/abuse as it affects the child's socioemotional development is examined in 41% of the cases (with special concern devoted to the child's attitudes). The family figures in 35% of NIAAA's projects, with even attention given to parent-child relationships, parental behavior, and family health. In 24% of projects, the child's physical development is a factor.

In addition to these research areas, NIAAA also exerts considerable effort both toward the training of personnel to more effectively deal with the child (35%) and toward involvement of the child's parents in program activities (29%).

Figure 15

Distribution of NIAAA FY '76 Early Childhood Research Projects, By Area of Research (N=17)

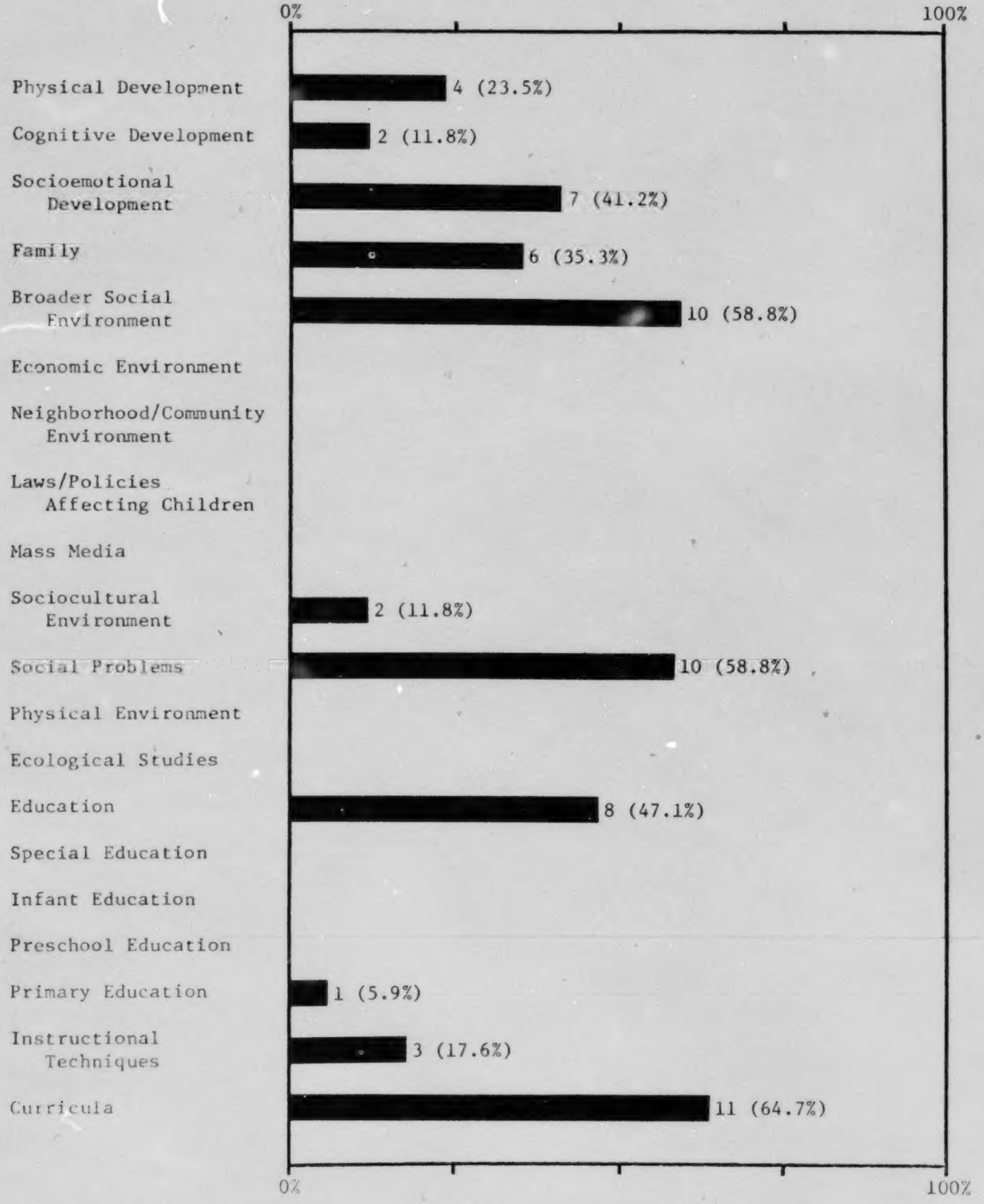
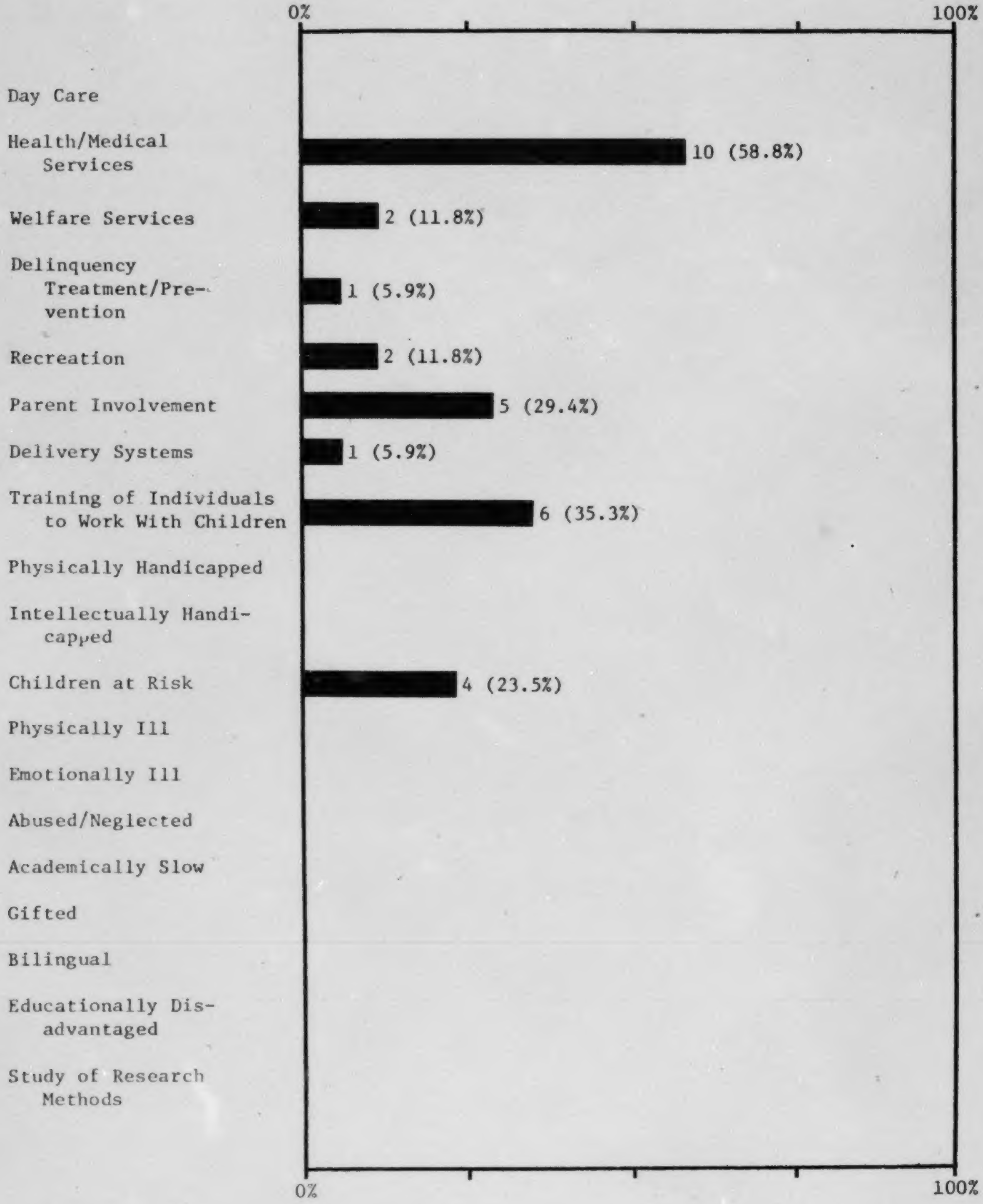


Figure 15 (Continued)

Distribution of NIAAA FY '76 Early Childhood Research Projects, By Area of Research (N=17)



Note. Categories are not mutually exclusive.

Table 44

Distribution of NIAAA FY '76 Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Demonstrations	11	(64.7)
Basic	4	(23.5)
Applied	2	(11.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '76 early childhood research (17 projects).

Table 45

Breakdown of NIAAA FY '76 Early Childhood Research Projects On Physical and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	4	(23.5)
Alcohol Abuse	4	(23.5)
Pregnancy and Childbirth	3	(17.6)
Body Growth	2	(11.8)
Physical Disease	1	(5.9)
Motor Development	1	(5.9)
Nutrition	1	(5.9)
Total Research on Socioemotional Development	7	(41.2)
Attitudes	5	(29.4)
Interpersonal Relationships	3	(17.6)
Perception of Self	2	(11.8)
Emotional Development	2	(11.8)
Personality	2	(11.8)
Development of Values/Morals	2	(11.8)
Motivation	1	(5.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '75 early childhood research (17 projects).

Table 46

Breakdown of NIAAA FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	6	(35.3)
Parent-Child Relationships	3	(17.6)
Parental Behavior	3	(17.6)
Family Health	3	(17.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '76 early childhood research (17 projects).

Table 47

Breakdown of NIAAA FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Teaching Techniques	3	(17.6)
Tutorial Instruction	1	(5.9)
Television Instruction	1	(5.9)
Peer Teaching	1	(5.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '76 early childhood research (17 projects).

Table 48

Breakdown of NIAAA FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	11	(64.7)
Drug Abuse Education	11	(64.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '76 early childhood research (17 projects).

Table 49

Distribution of NIAAA FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	7	(41.2)
Community Center	4	(23.5)
Home	3	(17.6)
Medical Clinic	2	(11.8)
Sheltered Workshop	2	(11.8)
Hospital	1	(5.9)
Residential Institution	1	(5.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIAAA FY '76 early childhood research (17 projects).

National Institute on Drug Abuse
Alcohol, Drug Abuse and Mental Health **Administration**, DHEW

0 FY '76 Funding of Early Childhood Research: $5.1 million

0 Number of Early Childhood Research Projects in FY '76: 33

0 Mission and/or Functions in Early Childhood Research:

The mission of the National Institute on Drug Abuse is to support research and demonstration projects investigating the nature and extent of drug use problems, comparing various treatment methods, and improving the efficiency of treatment for the young drug user. In addition, prevention and education research is supported through the expansion of model treatment and intervention ideas.

Distribution of FY'76 Early Childhood Activity

Various kinds of research activity are supported by NIDA in FY '76. For example, one-third of all active projects are applied research. Another 45% of NIDA projects are basic research or demonstration programs (approximately 27% each). Emphasis on the developmental processes is significant. Fifty-five percent of the projects include an investigation of the child's social-emotional development with particular attention being given to the child's attitudes. Of the projects concerned with physical development (46%), 39% relate to the physical effects of drug abuse. Other topics of major importance include the broader social environment (61%) which incorporates those projects examining the issue of drug abuse as a social problem, and research on children at risk for drug abuse (39%).

With regard to research on programs, a predominance of health services is obvious (64%)--this reflects a basic NIDA concern to provide health care for drug users/abusers. In addition, almost half (49%) of the projects include the development or demonstration of an educational curriculum, primarily addressed to the problems of drug use/abuse(39%).

Figure 16

Distribution of NIDA FY '76 Early Childhood Research Projects, By Area of Research (N=33)

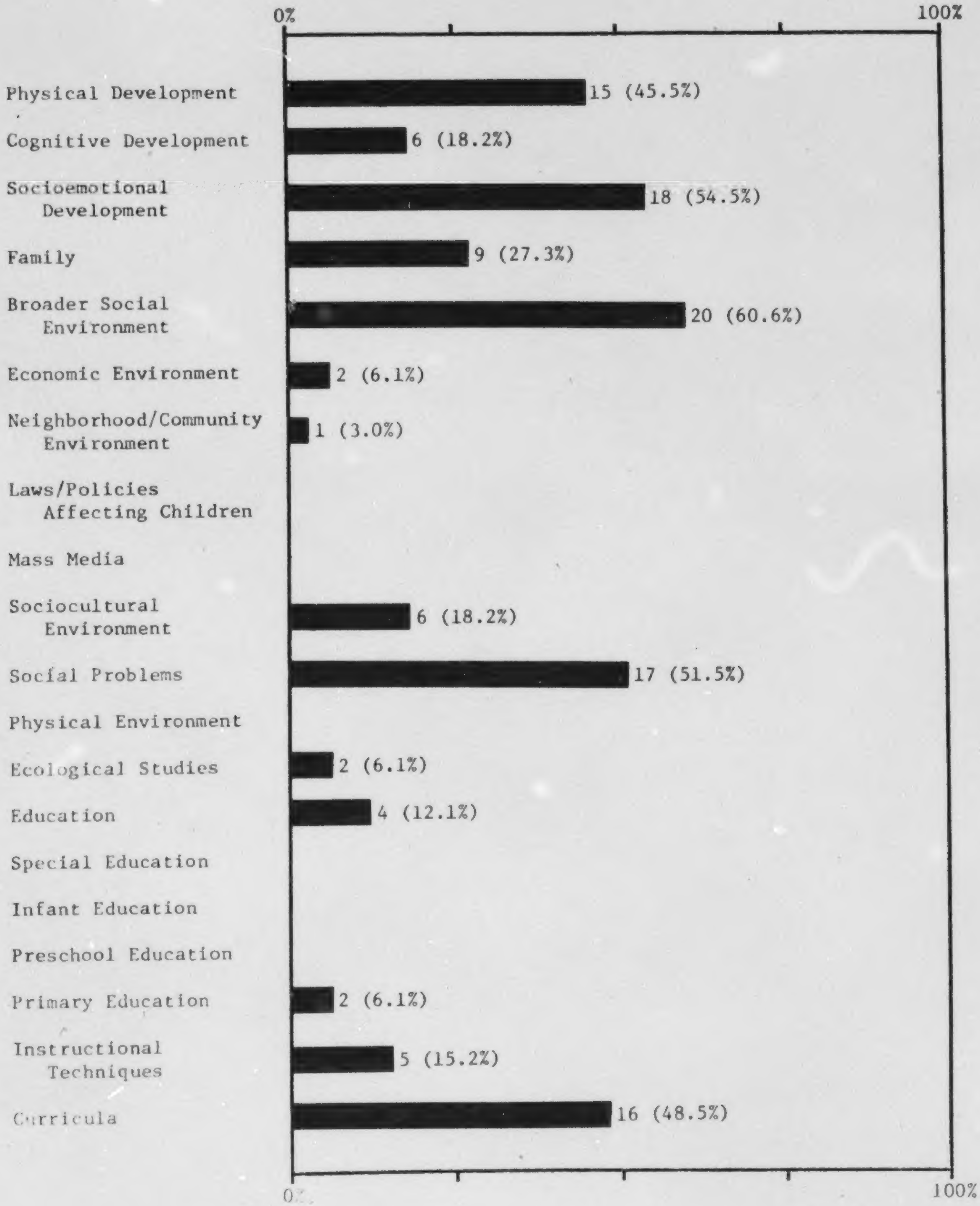
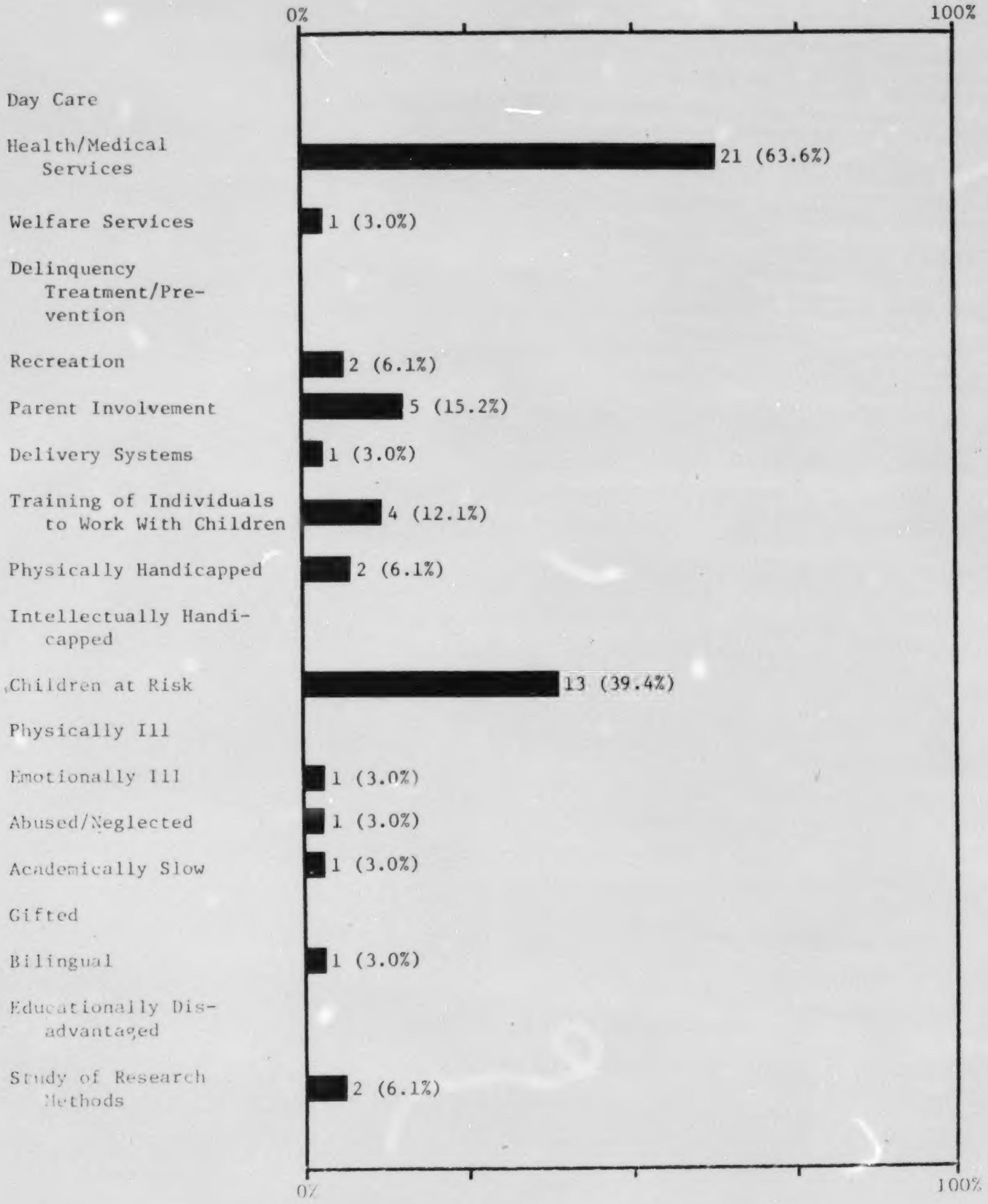


Figure 16 (Continued)

Distribution of NIDA FY '76 Early Childhood Research Projects, By Area of Research (N=33)



Note. Categories are not mutually exclusive.

Table 50

Distribution of NIDA FY '76
Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Applied	11	(33.3)
Basic	9	(27.3)
Demonstrations	9	(27.3)
Evaluation	2	(6.1)
Research Support and Utilization	2	(6.1)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '76 early childhood research (33 projects).

Table 51

Breakdown of NIDA FY '76 Early Childhood Research Projects
On Physical and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	15	(45.5)
Drug Abuse	13	(39.4)
Pregnancy and Childbirth	7	(21.2)
Pharmacology	2	(6.1)
Physical Handicaps	1	(3.0)
Body Growth	1	(3.0)
Child Abuse/Neglect	1	(3.0)
Epidemiology	1	(3.0)
Alcohol Abuse	1	(3.0)
Total Research on Socioemotional Development	18	(54.5)
Attitudes	14	(42.4)
Perception of Self	6	(18.2)
Emotional Development	6	(18.2)
Personality	6	(18.2)
Interpersonal Relations	2	(6.1)
Development of Values/Morals	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '76 early childhood research (33 projects).

Table 52

Breakdown of NIDA FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	16	(48.5)
Drug Abuse Education	13	(39.4)
Cultural Awareness	4	(12.1)
Fine Arts Education	2	(6.1)
Physical Education	1	(3.0)
Vocational/Technical Education	1	(3.0)
Environmental Studies	1	(3.0)
Education for Parenthood	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '76 early childhood research (33 projects).

Table 53

Distribution of NIDA FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	5	(15.2)
Community Center	3	(9.1)
Medical Clinic	2	(6.1)
Group Care Center	2	(6.1)
Residential Institution	2	(6.1)
Home	1	(3.0)
Hospital	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIDA FY '76 early childhood research (33 projects).

Rehabilitation Services Administration

- FY '76 Funding of Early Childhood Research: $.09 million
- Number of Early Childhood Research Projects Active in FY '76: 6
- Mission and/or Functions in Early Childhood Research:

The major research goals of the Rehabilitation Services Administration (RSA) are the development of new knowledge concerning the rehabilitation of handicapped individuals, the evaluation of existing knowledge in new settings, and the utilization of such knowledge in the delivery of vocational rehabilitation services.

Distribution of FY '76 Early Childhood Activity

The developmental processes of severely disabled children constitute a major focus of the rehabilitation projects at university-based training and rehabilitation centers funded by RSA. Figure 17 shows that research on the developmental processes is distributed as follows: physical (50%); cognitive (33%); and social-emotional (67%). Other areas that stand out are the family (50%) and research on physical handicaps (50%). The bulk of RSA research is categorized as applied (50%), with the remaining projects equally distributed among the following categories: basic (17%), development (17%), evaluation (17%) and demonstration (17%).

Figure 17

Distribution of RSA FY '76 Early Childhood Research Projects, By Area of Research (N=6)

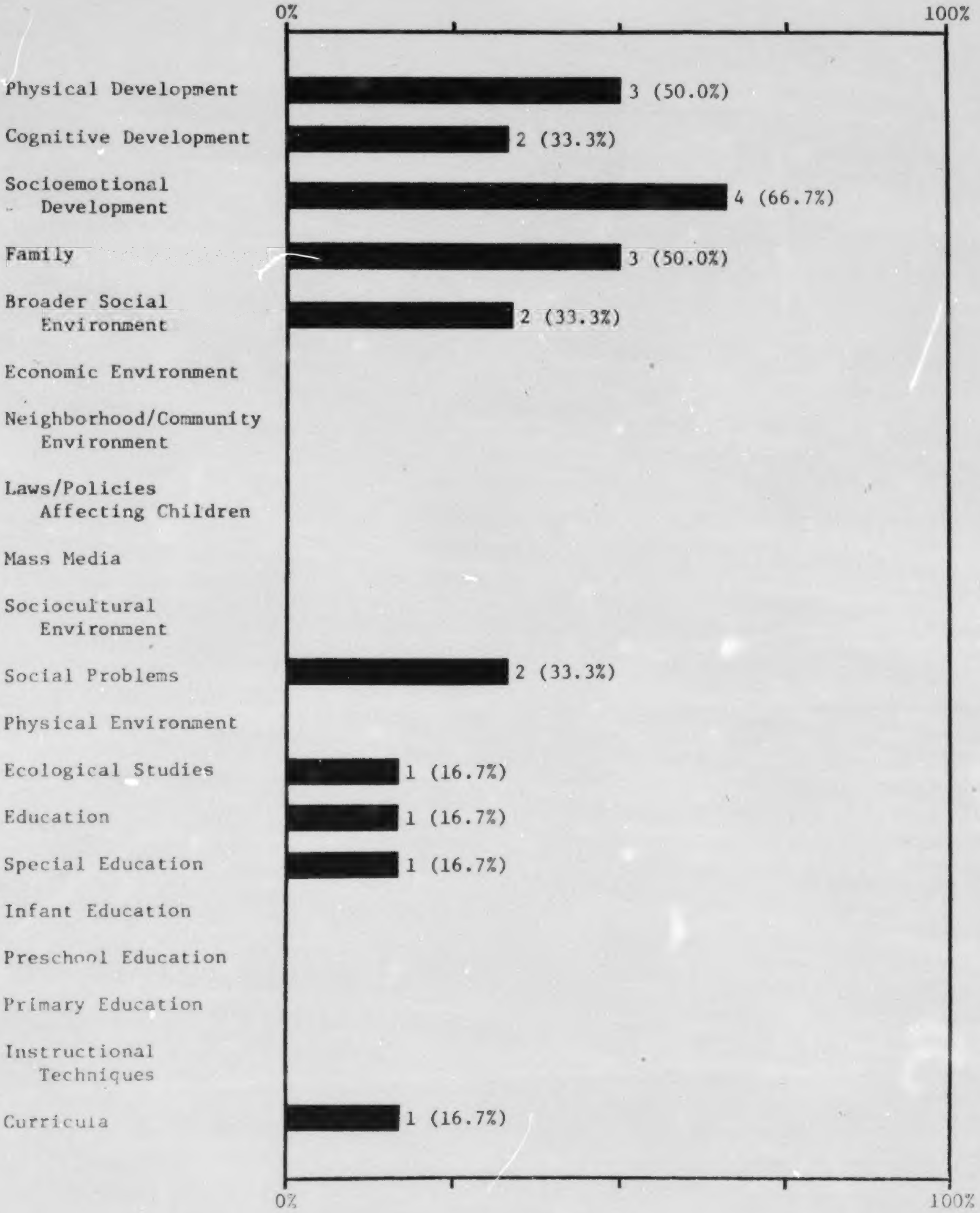
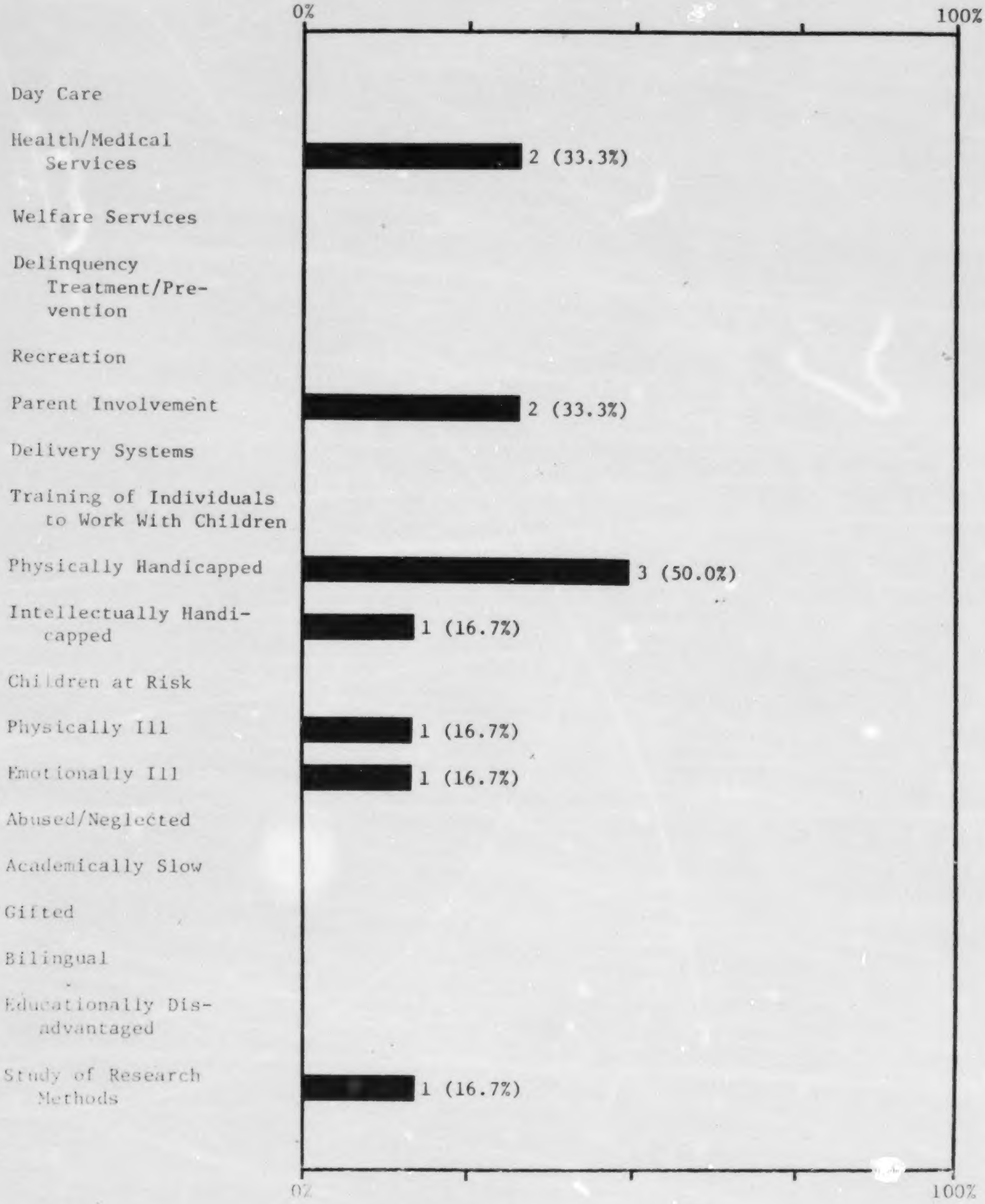


Figure 17 (Continued)

Distribution of RSA FY '76 Early Childhood Research Projects, By Area of Research (N=6)



Note. Categories are not mutually exclusive.

Table 54

Distribution of RSA FY '76 Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Applied	3	(50.0)
Basic	1	(16.7)
Evaluation	1	(16.7)
Demonstrations	1	(16.7)

Note. Categories are mutually exclusive. They are ranked according to number of projects.

[a] Percentage of total RSA FY '76 early childhood research (6 projects).

Table 55

Distribution of RSA FY '76 Early Childhood Research Projects, By Research Setting

Setting	No.	%[a]
School	1	(16.7)
Hospital	1	(16.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total RSA FY '76 early childhood research (6 projects).

The Social and Rehabilitation Service, DHEW

- FY '76 Funding of Early Childhood Research: $4.2 million
- Number of Early Childhood Research Projects Active in FY '76: 22
- Mission and/or Functions in Early Childhood Research:

The Social and Rehabilitation Service provides income maintenance, rehabilitation, and other social services to people in need. Among its research and development goals are the following: to develop methods of improving the services of community facilities through services integration and other innovative methods, to develop methods of increasing SRS client independence, particularly by developing alternatives to institutional care, and to develop and demonstrate improved methods of research utilization. Research which contributes to child welfare is conducted in such areas as protective services for neglected and abused children, adoption, foster care, day care, and health care.

Distribution of FY '76 Early Childhood Activity

The majority of SRS research activity is categorized as demonstration (41%) as can be seen in Table 56. Twenty-three percent of the research is devoted to evaluation efforts. Figure 18 displays the distribution of SRS projects by areas of research and reflects the agency's special interest in health services (64%), welfare services (32%) and service delivery systems (86%).

Figure 18

Distribution of SRS FY '76 Early Childhood Research Projects, By Area of Research (N=22)

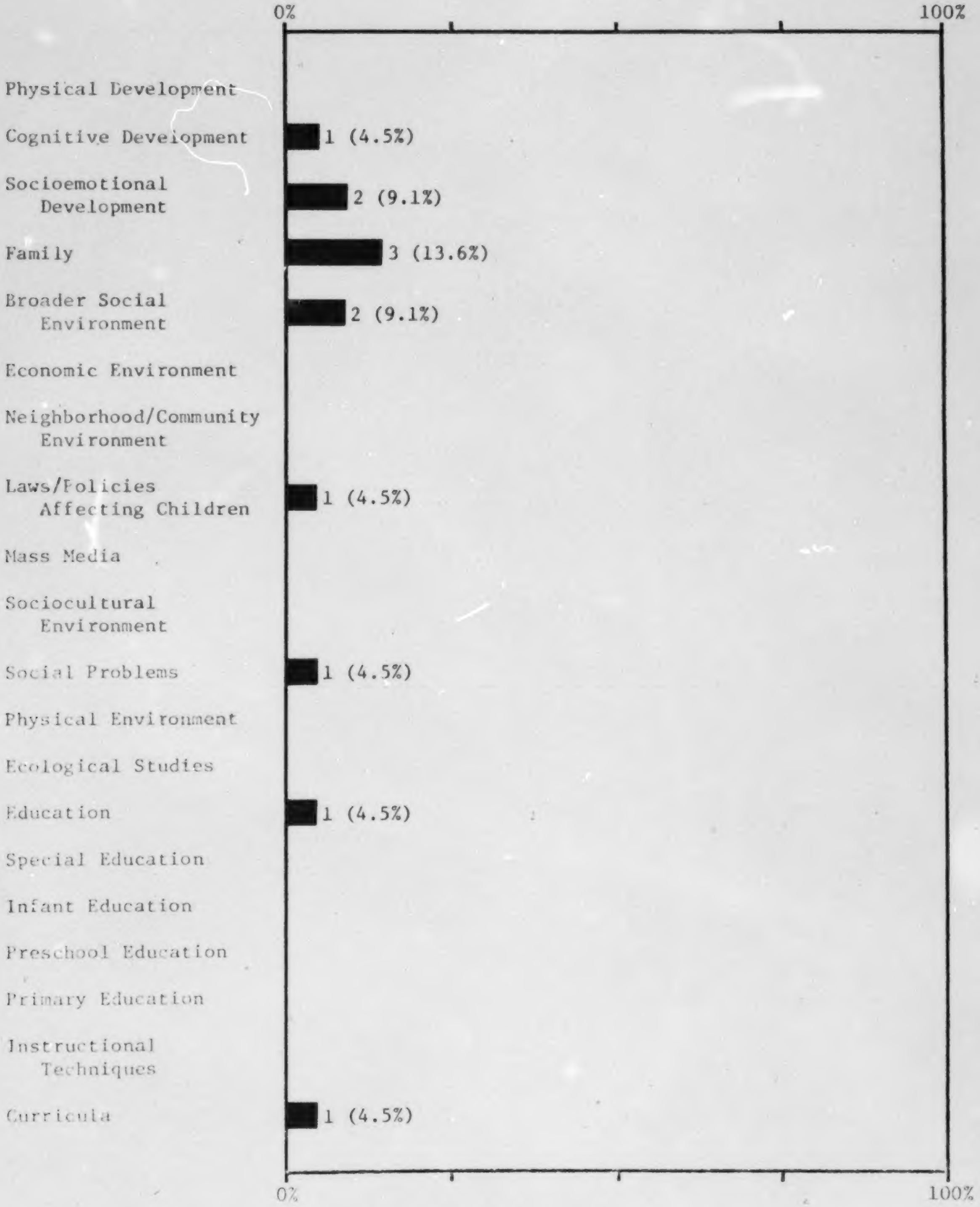
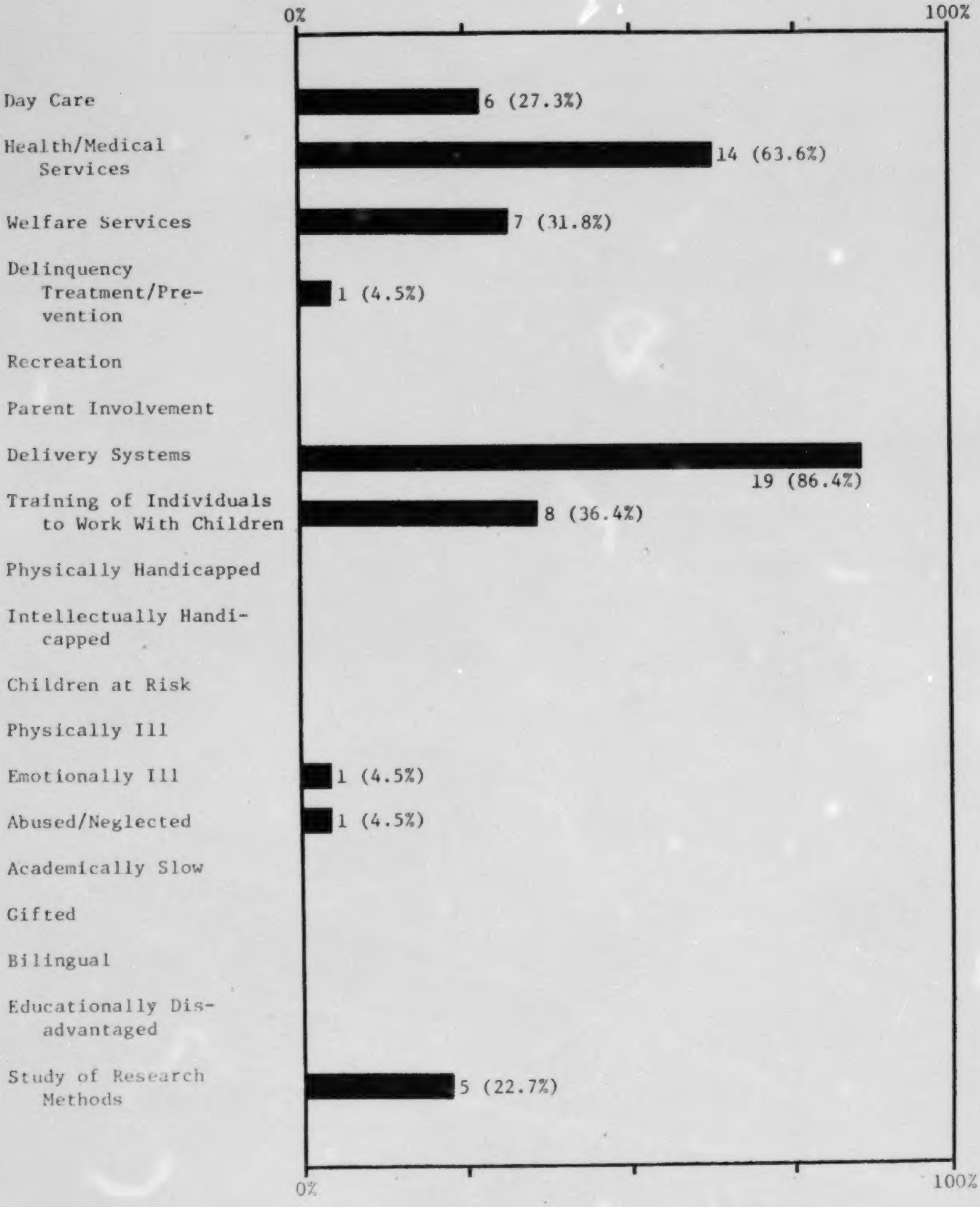


Figure 18 (Continued)

Distribution of SRS FY '76 Early Childhood Research Projects, By Area of Research (N=22)



Note. Categories are not mutually exclusive.

Table 56

Distribution of SRS FY '76 Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Demonstrations	9	(40.9)
Evaluation	5	(22.7)
Applied	3	(13.6)
Policy Research	3	(13.6)
Research Support and Utilization	2	(9.1)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total SRS FY '76 early childhood research (22 projects).

Table 57

Distribution of SRS FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
Medical Clinic	5	(22.7)
Group Care Center	4	(18.2)
Home	3	(13.6)
School	3	(13.6)
Residential Institution	1	(4.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total SRS FY '76 early childhood research (22 projects).

National Center for Education Statistics (DHEW)

- FY '76 Funding of Early Childhood Research: $8.2 million
- Number of Early Childhood Research Projects Active in FY '76: 30
- Mission and/or Function in Early Childhood Research:

The National Center for Education Statistics is the primary statistical agency within the Education Division of the United States Department of Health, Education and Welfare. The mission of NCES is to develop and provide comprehensive statistics about the condition of American education, to prepare special analyses of such statistics, to assist State and local agencies in meeting their statistical requirements, and to report on educational activities in foreign countries. NCES is the primary Federal agency responsible for the collection, processing, storage, interpretation, reporting and dissemination of statistics about education. The Center reviews and assembles data from many sources to report annually to Congress on the condition of education and to provide information to the education community.

Distribution of FY '76 Early Childhood Activity

The major orientation of NCES research is categorized as support and utilization activities (90%) which encompasses its information dissemination efforts. Figure 19 reflects the educational orientation of the center, as seen in the high degree of research activity in the areas of instruction (70%) and delivery systems (47%).

Plans for FY '77

The education of diverse target populations represents the highest level of interest for NCES. Research on methodology including program evaluation methods, survey methods, longitudinal research, and methods to improve comparability will also receive a high degree of emphasis. Of moderate interest to the agency will be research on the family and the socioemotional development of children.

Figure 19

Distribution of NCES FY '76 Early Childhood Research Projects,
By Area of Research (N=30)

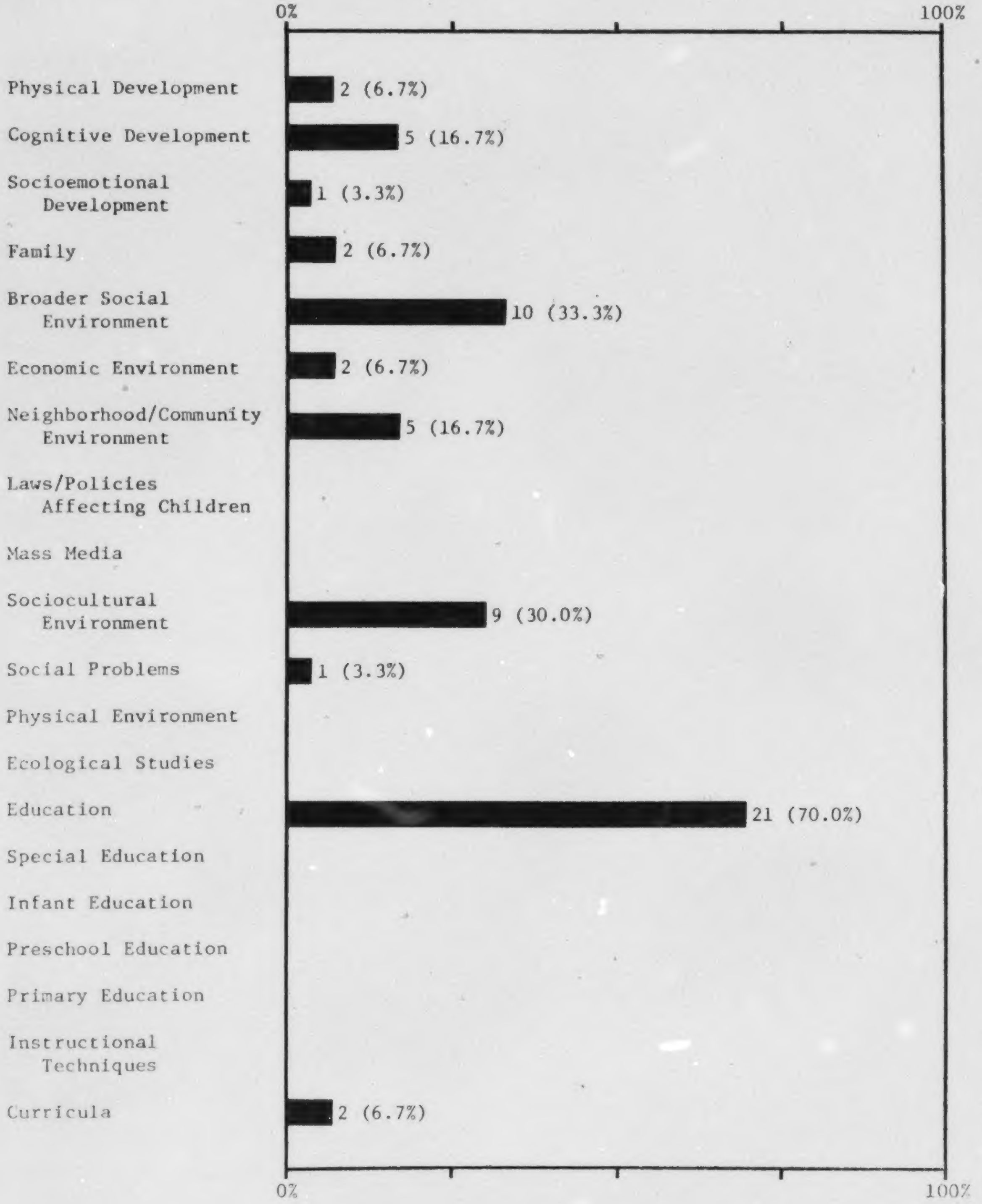
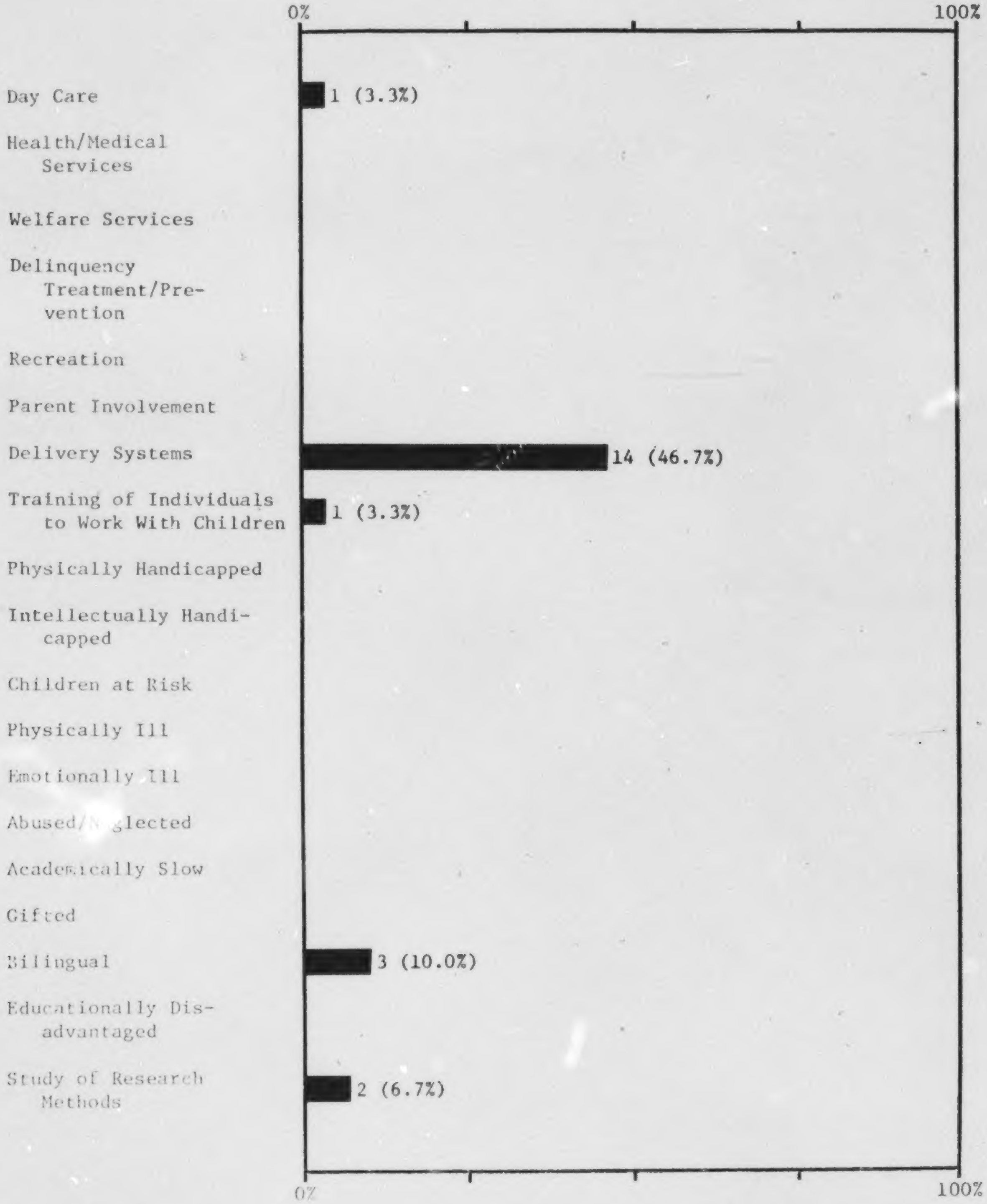


Figure 19 (Continued)

Distribution of NCES FY '76 Early Childhood Research Projects, By Area of Research (N=30)



Note. Categories are not mutually exclusive.

Table 58

Distribution of NCES FY '76 Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Research Support and Utilization	27	(90.0)
Applied	2	(6.7)
Policy Research	1	(3.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NCES FY '76 early childhood research (30 projects).

Table 59

Breakdown of NCES FY '76 Early Childhood Research Projects, By Research Setting

Setting	No.	%[a]
School	22	(73.3)
Group Care Center	1	(3.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NCES FY '76 early childhood research (30 projects).

National Institute of Education, DHEW

- FY '76 Funding of Early Childhood Research: $67.7 million
- Number of Early Childhood Research Projects Active in FY '76: 362
- Mission and/or Function in Early Childhood Research:

The National Institute of Education has been mandated by Congress to conduct, collect, and disseminate educational research, to train educational researchers, and to assist in effecting these tasks through sponsorship of grants, contracts, and technical assistance. The NIE has, as its goal, the amelioration of the problems of American children through education, the advancement of the practice of education as an art, as a science, as a profession, and the strengthening of the scientific foundations of education through the construction of an effective research and development system.

Early childhood research is not a separate priority of NIE. Instead, research in early childhood is undertaken primarily insofar as it relates to the following priority, goal-oriented activities:

Dissemination and Resources - Improving dissemination and application of the results of educational research and development, and building an effective R&D system.

Educational Equity - Improving school's abilities to provide equal educational opportunity for populations whose opportunities have been limited because of their racial, ethnic, or language background, sex, or socioeconomic status.

Education and Work - Improving the ability of the education system to prepare youths and adults for entering and progressing in careers.

School Capacity for Problem Solving - Improving the capability of schools and school systems to diagnose their own problems and to diagnose their own problems and to design solutions.

Basic Skills - Improving student performance in such essential skills as reading and mathematics.

Finance and Productivity - Improving the ability of educational institutions to provide high quality education under conditions of declining enrollment, rising costs, and increased competition for funds.

Distribution of FY '76 Early Childhood Activity

The NIE mission of improving the quality of education is reflected in Figure 20 in the high concentration of activity in the following areas: instruction (75%), primary education (25%), curriculum development (43%), and teaching techniques (37%). Within the category of instructional techniques, a major research focus is on the development of individualized education programs (12%). Table 65 displays the breakdown of research projects for the category of educational curriculum showing a concentration of interest in the areas of language curriculum (17%) and reading curriculum (13%).

The cognitive development of young children is another major area of research concentration for NIE. Table 62 shows that cognitive performance (13%) and language development (11%) are the most researched categories in this area. Thirty-five percent of the childhood research in FY '76 is categorized as applied, while the remainder is distributed as follows: support and utilization (20%), basic (19%), evaluation (10%), policy (9%), and demonstration. (6%).

The development of improved research methodology and dissemination of educational research is another concern of NIE, as shown in the substantial allocation of support to developing research methods (17%). This figure includes the NIE support of the ERIC Clearinghouse network of information and dissemination systems.

Plans for FY '77

NIE will continue to focus a high level of attention on the cognitive development of children, especially the following categories: perception, thought processes, and language development. A low level of interest will continue with respect to the study of physical and intellectual handicaps. Investigations of family structure and functioning will again receive a moderate to low level of emphasis. A number of categories in the area of education will continue to be of high interest to the agency, such as instructional techniques, curriculum development, basic skills, reading, and teaching innovations. Voucher plans, however, will be of low interest in the plans for the coming year. The following target groups will continue to receive a high level of attention: elementary school children, minority ethnic groups, gifted and disadvantaged children, and bilingual students.

Research on methodology will remain a high priority including program evaluation methods, statistical techniques and research design. Studies of dissemination, interdisciplinary research and conferences will also receive a high level of agency support.

Figure 20

Distribution of NIE FY '76 Early Childhood Research Projects, By Area of Research (N=362)

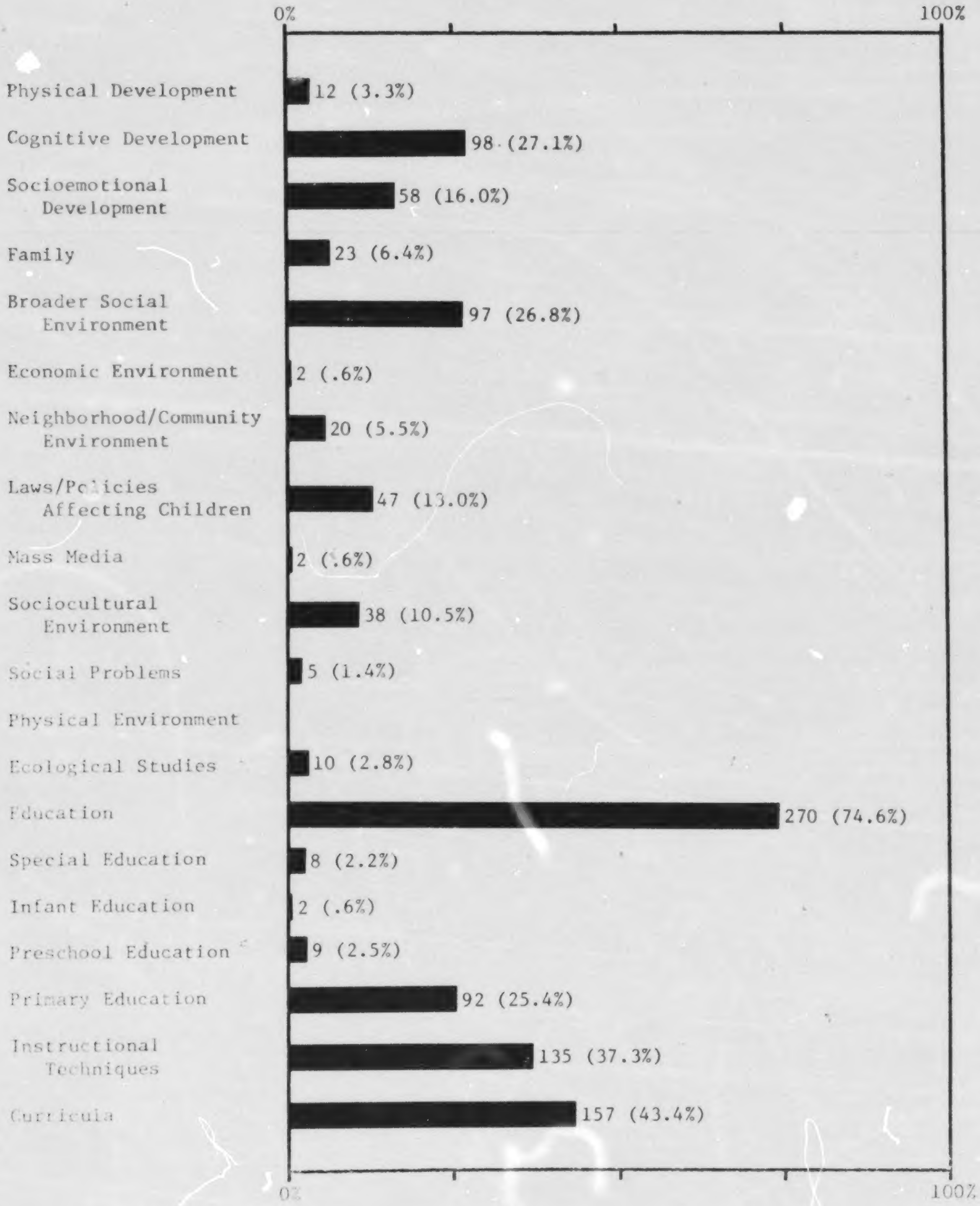
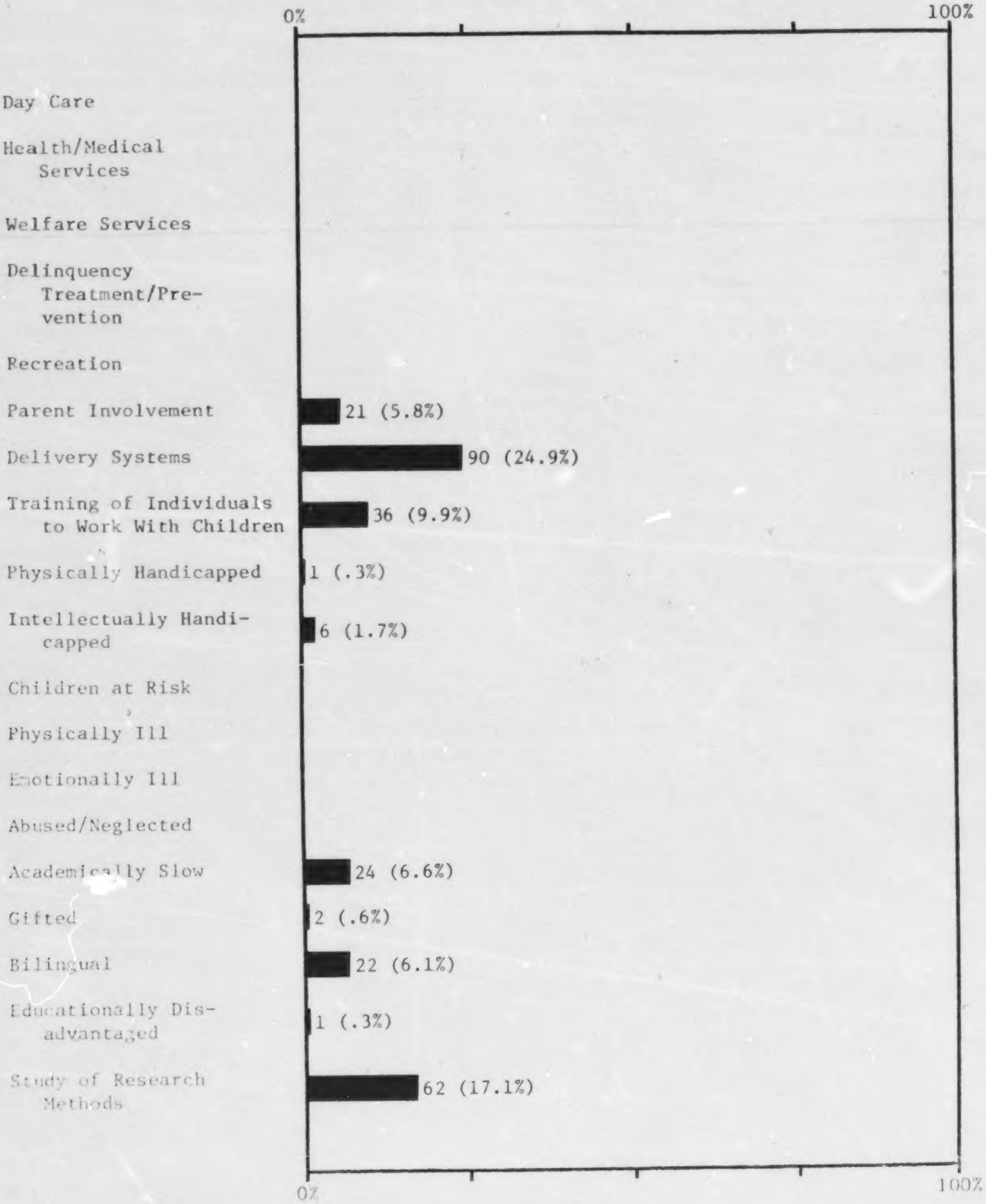


Figure 20 (Continued)

Distribution of NIE FY '76 Early Childhood Research Projects, By Area of Research (N=362)



Note. Categories are not mutually exclusive.

Table 60

Distribution of NIE FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	128	(35.4)
Research Support and Utilization	73	(20.2)
Basic	70	(19.3)
Evaluation	36	(9.9)
Policy Research	34	(9.4)
Demonstrations	21	(5.8)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

Table 61

Breakdown of NIE FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	23	(6.4)
Family/Society Interface	10	(2.8)
Parental Behavior	7	(1.9)
Family Structure	4	(1.1)
Parent-Child Relationships	3	(.8)
Sibling Relationships	2	(.6)
Child Rearing	1	(.3)
Physical Environment of Home	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

Table 62

Breakdown of NIE FY '75 Early Childhood Research Projects On Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	98	(27.1)
Cognitive Achievement	47	(13.0)
Language Development	40	(11.0)
Reading	12	(3.3)
Learning Processes	11	(3.0)
Memory	11	(3.0)
Problem Solving	9	(2.5)
Perception	7	(1.9)
Intellectual Handicaps	3	(.8)
Concept Formation	2	(.6)
Computer Simulation of Thought	2	(.6)
Imagery	2	(.6)
Attention	1	(.3)
Creativity	1	(.3)
Total Research on Socioemotional Development	58	(16.0)
Attitudes	30	(8.3)
Perception of Self	20	(5.5)
Interpersonal Relationships	19	(5.2)
Motivation	8	(2.2)
Development of Values/Morals	7	(1.9)
Emotional Development	3	(.8)
Personality	2	(.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

Table 63

Breakdown of NIE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	135	(37.3)
Individualized Instruction	43	(11.9)
Bilingual Instruction	10	(2.8)
Television Instruction	10	(2.8)
Open Classroom	8	(2.2)
Voucher System	6	(1.7)
Peer Teaching	2	(.6)
Nongraded Instruction	2	(.6)
Tutorial Instruction	1	(.3)
Team Teaching	1	(.3)
Volunteer Community Service	1	(.3)
Cross-age Teaching	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

Table 64

Distribution of NIE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	202	(55.8)
Home	9	(2.5)
Medical Clinic	2	(.6)
Group Care Center	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

Table 65

Breakdown of NIE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	157	(43.4)
Language Arts	60	(16.6)
Reading	47	(13.0)
Math	40	(11.0)
Career Education	19	(5.2)
Cultural Awareness Education	8	(2.2)
Fine Arts Education	7	(1.9)
Vocational/Technical Education	7	(1.9)
Social Studies	6	(1.7)
Science	5	(1.4)
Physical Education	4	(1.1)
Health Education	3	(.8)
Environmental Studies	2	(.6)
Citizenship Training	2	(.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total NIE FY '76 early childhood research (362 projects).

U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $209.6 million
- Number of Early Childhood Research Projects Active in FY '76: 1,608
- Mission and/or Function in Early Childhood Research:

The Office of Education's functions are to collect facts and statistics to show the condition and progress of education, to diffuse information to aid in the establishment and maintenance of efficient school systems and otherwise to promote the cause of education. Related functions delegated to OE include the responsibility for Federal financial assistance to education and for special studies and programs. This report will describe eight sections of OE which engage in development, demonstration and evaluation activities affecting children: the Bureau of Education for the Handicapped, the Bureau of Elementary and Secondary Education, the Office of Indian Education, the Bureau of Occupational and Adult Education, the Office of Planning, Budgeting and Evaluation, the Right-to-Read Effort, the Office of Career Education, and the Division of International Education.

Distribution of FY '76 Early Childhood Activity

The Office of Education continues to support the largest body of demonstration projects (73%) relating to children in FY '76. Data are collected for only those projects administered at the Federal level. Table 66 presents a breakdown of early childhood projects by kind of research for OE as a whole. The majority of projects funded in FY '76 by OE are categorized as demonstration (73%). This figure reflects the OE emphasis on the demonstration of innovative educational models. Most of the remaining research is directed at the development of educational models, curricula and materials (14%) with a small amount of activity supporting evaluation (3%) and research support and utilization activities (5%).

The individual divisions of OE, which support activities in different areas of research, also show some differences in the kind of research they support. The Bureau of Education for the Handicapped, the Bureau of Elementary and Secondary Education, the Office of Career Education, the Office of Indian Education and the Right-to-Read Effort all primarily support demonstration projects (61%, 83%, 79%, 85% and 67% respectively). The Division of International Education supports a high percentage of development (74%) projects, while the Office of Planning, Budgeting and Evaluation undertakes a substantial number of evaluation efforts (69%).

Figure 21

Distribution of OE FY '76 Early Childhood Research Projects, By Area of Research (N=1,608)

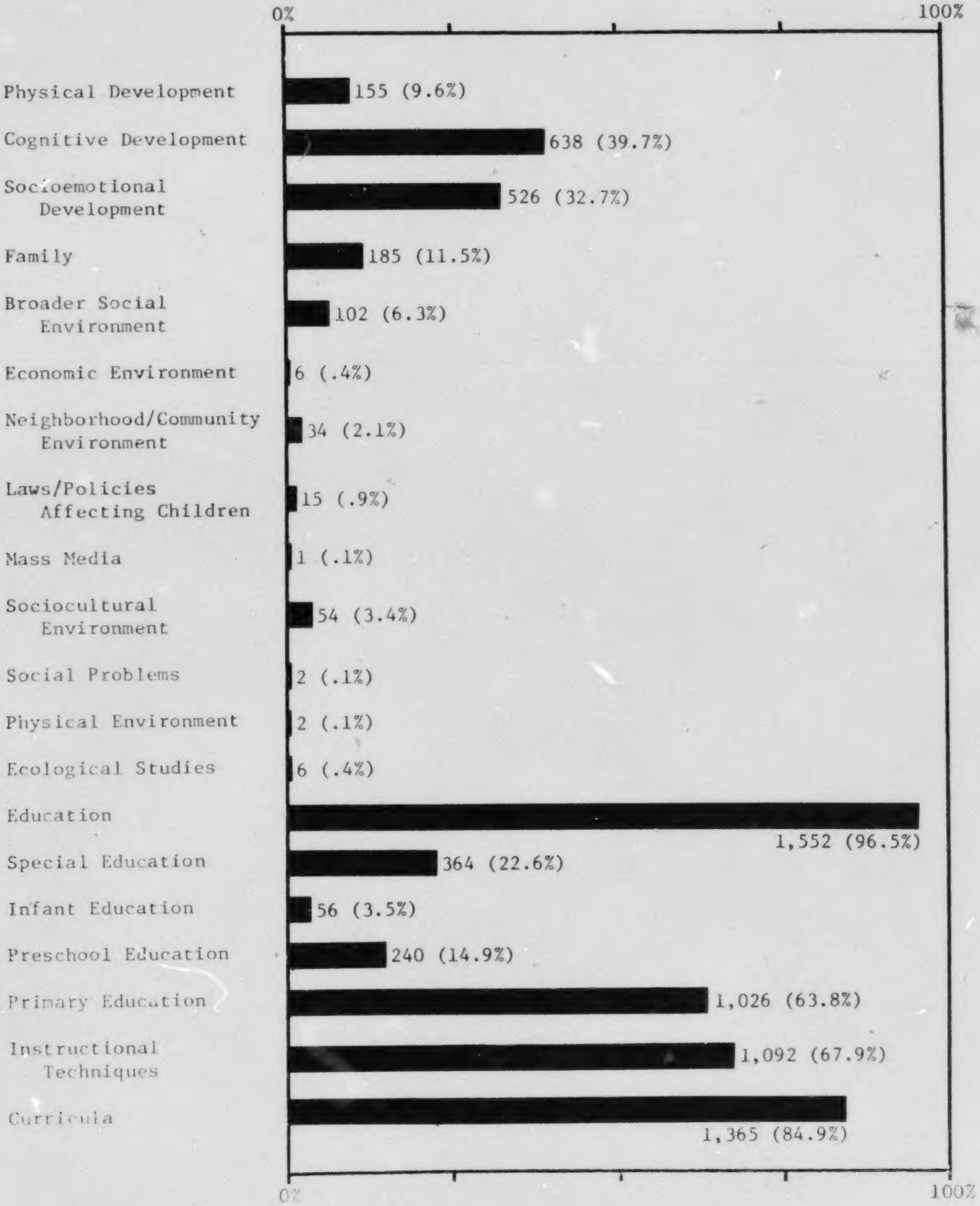
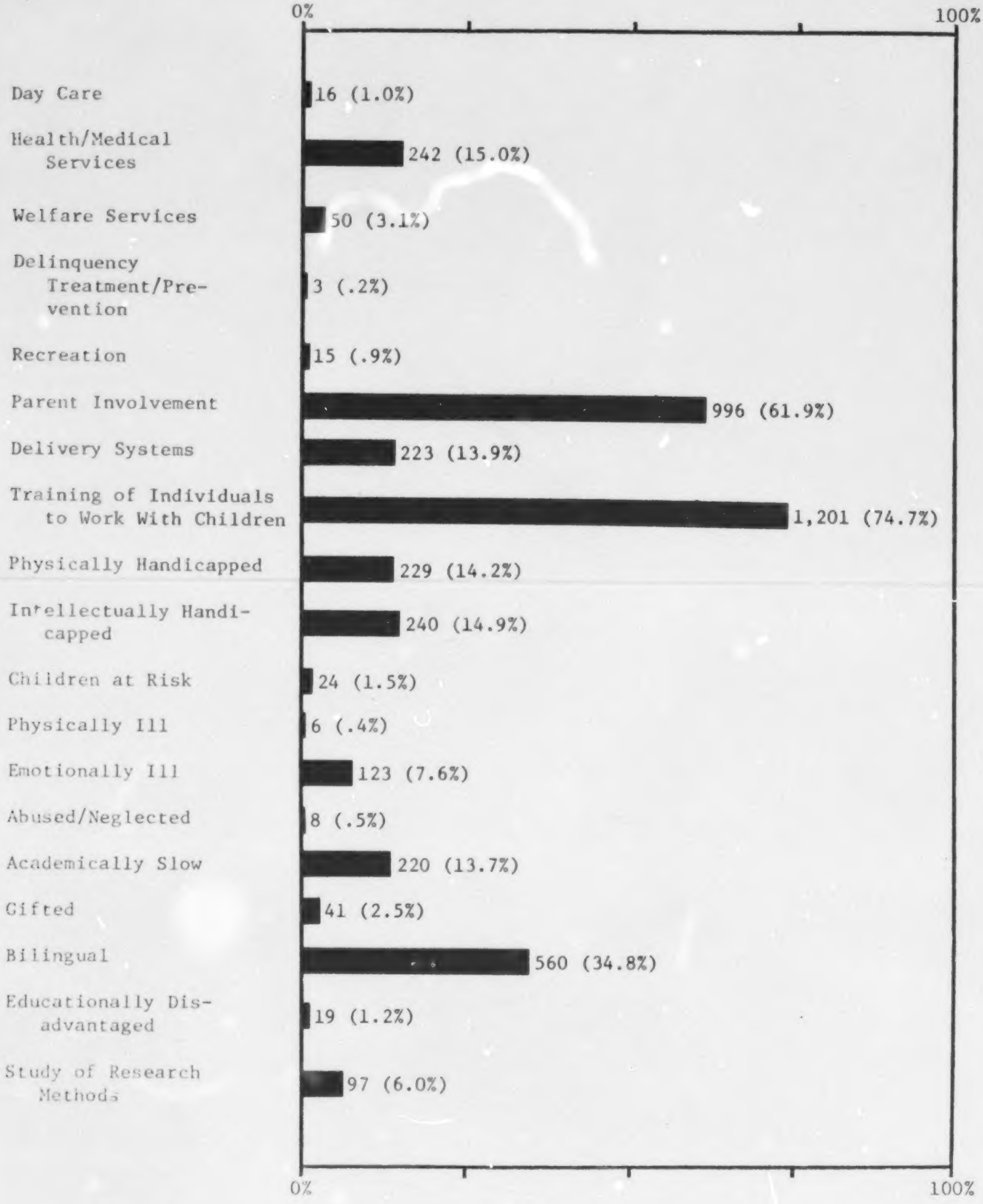


Figure 21 (Continued)

Distribution of OE FY '76 Early Childhood Research Projects,
By Area of Research (N=1,608)



Note. Categories are not mutually exclusive.

Table 66

Distribution of OE FY '76 Early Childhood Projects, By Kind of Research

Kind of Research	No.	%[a]
Demonstration	1,179	(73.3)
Applied	226	(14.1)
Research Support and Utilization	78	(4.9)
Policy Research	58	(3.6)
Evaluation	50	(3.1)
Basic	17	(1.1)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OE FY '76 early childhood research (1,608 projects).

Bureau of Education for the Handicapped
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $52.3 million
- Number of Early Childhood Research Projects Active in FY '76: 370
- Mission and/or Functions in Early Childhood Research:

The mission of the Bureau of Education for the Handicapped is to insure that all handicapped children receive appropriate educational services to enable them to develop their fullest potential and thereby reduce their degree of dependency. BEH research goals at the early childhood level include: (1) improving procedures for early identification of children at risk; (2) determining ways to make preschool services more appropriate to the unique needs of handicapped children; and (3) disseminating valid identification, assessment, and intervention information to those who are responsible for the establishment and maintenance of service delivery systems.

Distribution of FY'76 Early Childhood Activity

Figure 22 reflects the focus of BEH research on the education of children with handicaps, with high levels of research activity displayed in the following categories: instruction (88%); special education (83%); curriculum (53%); physical handicap (50%); and intellectual handicaps (50%). BEH research on instructional techniques, as seen in Table 69, shows a heavy concentration of activity in the area of individualized education (30%). Research on the family is concentrated in the categories parental behavior (11%) and family health (8%). A primary focus of research on educational curriculum is on language arts (15%).

A wide range of handicapping conditions is included in the scope of BEH projects. Table 71 displays the distribution of activity across handicaps: mentally retarded (34%); learning disabled (27%); aurally handicapped (24%); communicative disorders (22%); and visually handicapped (19%).

Several aspects of the development of the child receive considerable attention in FY '76 projects. In the area of physical development, motor development (16%) receives the greatest amount of attention. Language development (22%) and cognitive performance (18%) are the most researched categories in the area of cognitive development. Within the social-emotional development area, interpersonal relations (9%), self perception (7%) and emotional development (7%) are the factors focused on most often.

Plans for FY '77

BEH will continue to focus on the education of children of a wide range of ages and with a wide range of handicapping conditions. Within the area of education, high levels of interest are indicated for instructional techniques, curriculum development, teaching innovations and equipment development. Parenting skills will also be emphasized in FY '77, as will research on learning, intellectual handicaps, emotional development, and infant education/stimulation programs. Moderate activity will characterize the research effort at BEH in the areas of attitudes and interpersonal relationships, as well as bilingual instruction. Interest is also indicated in child abuse, as it bears on handicapped children. Methodological issues will receive a medium level of interest, particularly in the areas of program evaluation, observational and survey methods, research design and longitudinal research.

Figure 22

Distribution of BEH FY '76 Early Childhood Research Projects, By Area of Research (N=370)

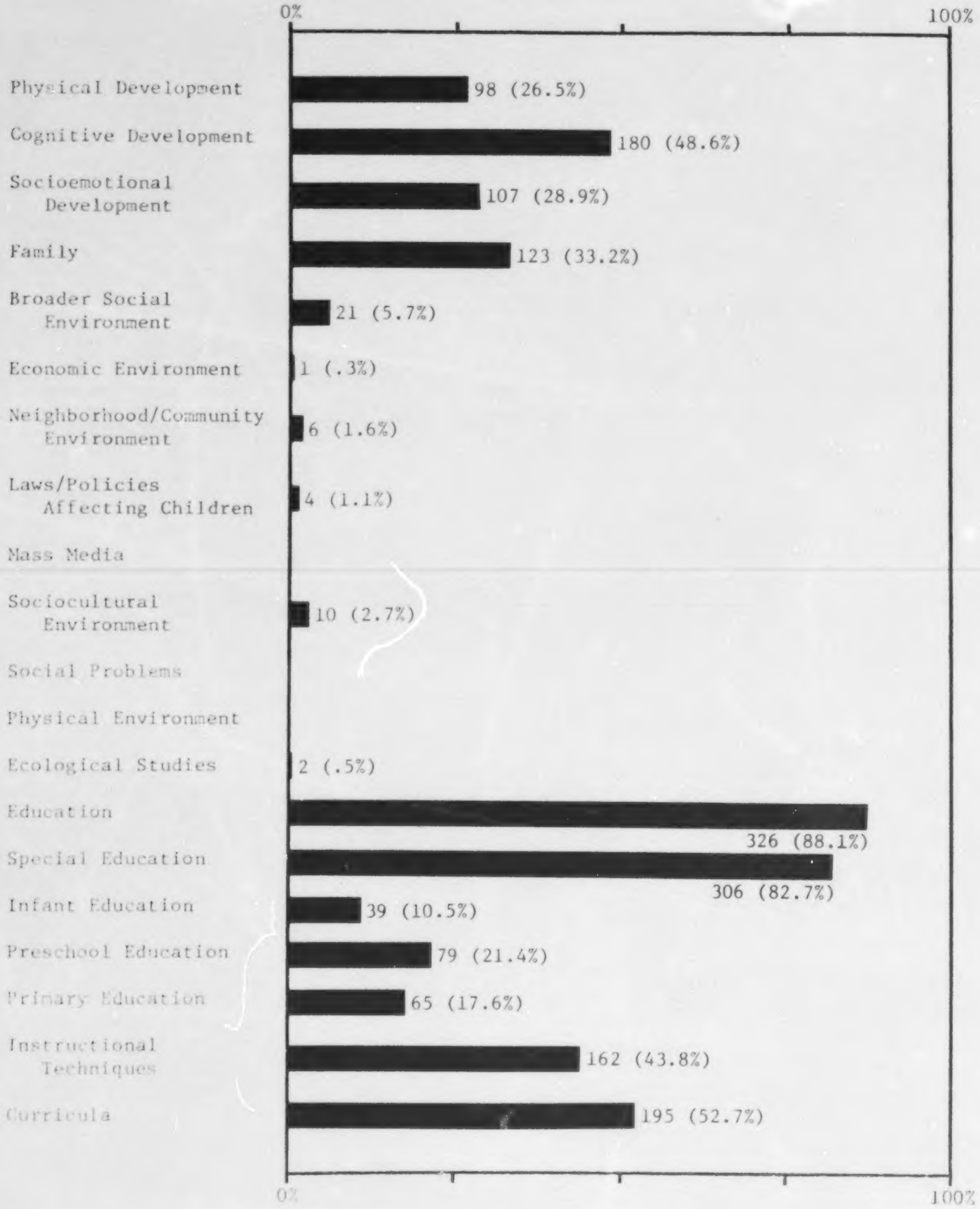
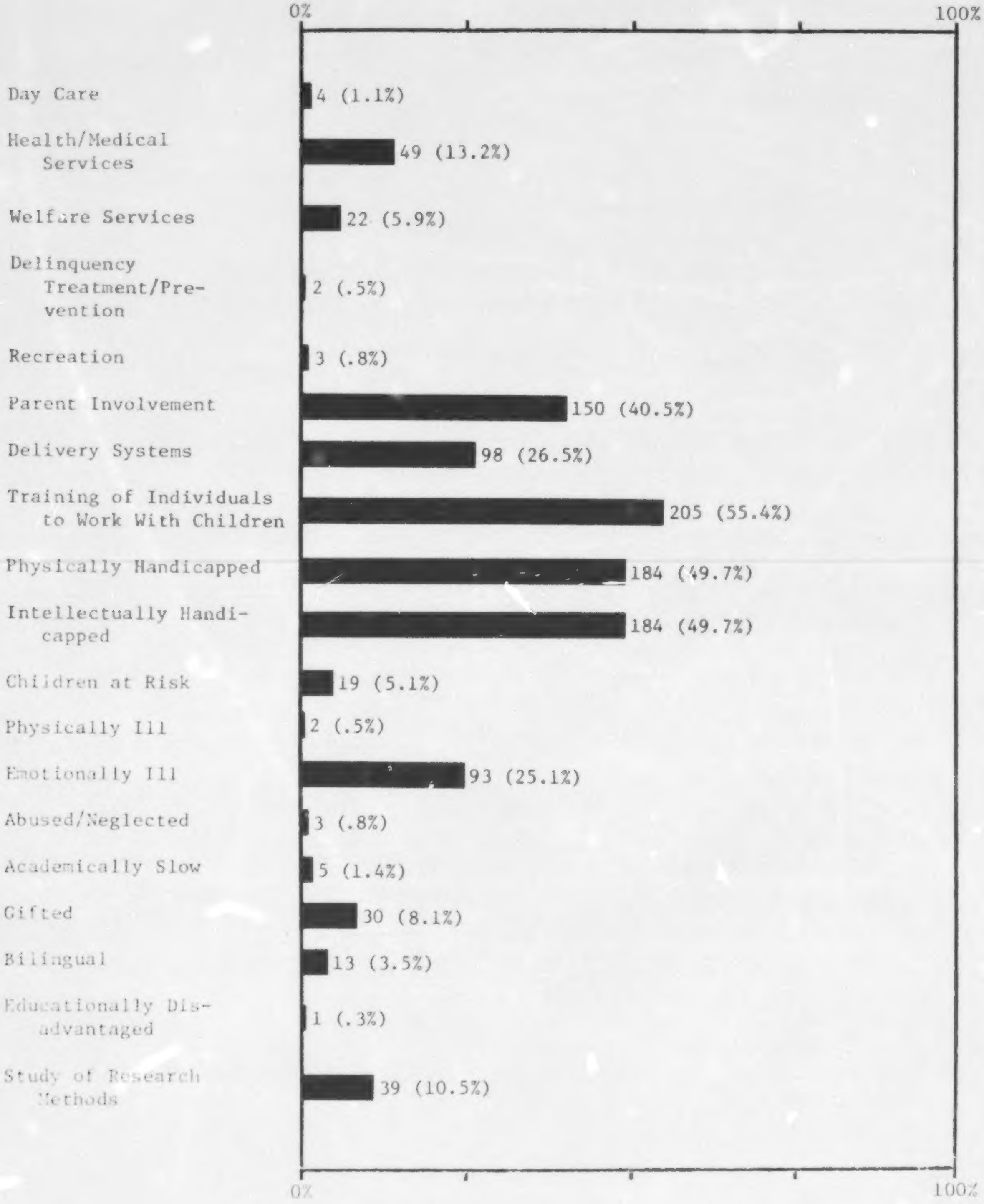


Figure 22 (Continued)

Distribution of BEH FY '76 Early Childhood Research Projects, By Area of Research (N=370)



Note. Categories are not mutually exclusive.

Table 67

Breakdown of BEH FY '76 Early Childhood Research Projects On Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	98	(26.5)
Motor Development	58	(15.7)
Sensory Processes	24	(6.5)
Physical Handicaps	21	(5.7)
Body Growth	3	(.8)
Physical Characteristics	3	(.8)
Physical Disease	1	(.3)
Pregnancy and Childbirth	1	(.3)
Nutrition	1	(.3)
Pharmacology	1	(.3)
Drug Abuse	1	(.3)
Accidents	1	(.3)
Total Research on Cognitive Development	180	(48.6)
Language Development	83	(22.4)
Cognitive Achievement	68	(18.4)
Intellectual Handicaps	43	(11.6)
Perception	41	(11.1)
Problem Solving	18	(4.9)
Concept Formation	17	(4.6)
Learning Processes	13	(3.5)
Reading	9	(2.4)
Creativity	8	(2.2)
Memory	6	(1.6)
Attention	4	(1.1)
Play	4	(1.1)
Imagery	1	(.3)
Total Research on Socioemotional Development	107	(28.9)
Interpersonal Relationships	32	(8.6)

Table 67 (Continued)

Breakdown of BEH FY '76 Early Childhood Research Projects On Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Perception of Self	24	(6.5)
Emotional Development	24	(6.5)
Attitudes	18	(4.9)
Personality	6	(1.6)
Motivation	5	(1.4)
Development of Values/Morals	2	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '75 early childhood research (370 projects).

Table 68

Breakdown of BEH FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	123	(33.2)
Parental Behavior	39	(10.5)
Family Health	31	(8.4)
Parent-Child Relationships	24	(6.5)
Child Rearing	8	(2.2)
Sibling Relationships	3	(.8)
Family Structure	1	(.3)
Family/Society Interface	1	(.3)
Physical Environment of Home	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '76 early childhood research (370 projects).

Table 69

Breakdown of BEH FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	162	(43.8)
Individualized Instruction	111	(30.0)
Tutorial Instruction	10	(2.7)
Team Teaching	6	(1.6)
Bilingual Instruction	4	(1.1)
Peer Teaching	4	(1.1)
Nongraded Classes	4	(1.1)
Open Classroom	3	(.8)
Volunteer Community Service	3	(.8)
Television Instruction	1	(.3)
Cross-age Teaching	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '76 early childhood research (370 projects).

Table 70

Breakdown of BEH FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	195	(52.7)
Language Arts	56	(15.1)
Math	19	(5.1)
Reading	18	(4.9)
Physical Education	12	(3.2)
Fine Arts Education	10	(2.7)
Education for Parenthood	10	(2.7)
Health Education	8	(2.2)
Cultural Awareness	6	(1.6)
Vocational/Technical Education	6	(1.6)
Career Education	4	(1.1)
Social Studies	3	(.8)
Science	2	(.5)
Drug Abuse Education	1	(.3)
Environmental Studies	1	(.3)
Citizenship Training	1	(.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '76 early childhood research (370 projects).

Table 71

Breakdown of BEH FY '76 Early Childhood Research Projects Relating to Handicapped Children

Category	No.	%[a]
Total Research on Handicapped Children	318	(85.9)
Mentally Retarded	127	(34.3)
Learning Disabled	101	(27.3)
Aurally Handicapped	89	(24.1)
Speech Handicapped	83	(22.4)
Visually Handicapped	70	(18.9)
Orthopedically Handicapped	57	(15.4)
Neurologically Handicapped	30	(8.1)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '76 early childhood research (370 projects).

Table 72

Distribution of BEH FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	159	(43.0)
Home	78	(21.1)
Group Care Center	42	(11.4)
Community Center	17	(4.6)
Medical Clinic	15	(4.1)
Residential Institution	12	(3.2)
Sheltered Workshop	3	(.8)

Note. Categories not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BEH FY '76 early childhood research (370 projects).

Bureau of Elementary and Secondary Education
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $59.3 million
- Number of Early Childhood Research Projects Active in FY '76: 264
- Mission and/or Functions in Early Childhood Research:

The Bureau of Elementary and Secondary Education formulates policy for, directs, and coordinates the activities and elements of the Office of Education which deal with preschool, elementary and secondary education. For the purposes of this report, nine divisions are contacted: (1) The Division of Supplementary Centers and Services administers two kinds of innovative demonstration projects: those which provide solutions to state and local educational problems under the State Plan Program and those which provide solutions to problems common to all or several states under the Special Program and Project authority. (2) The Office of Environmental Education supports the development, demonstration, and dissemination of multidisciplinary, problem-oriented environmental education programs. (3) The Division of Educational Technology supports the effective employment of technology for improvement of instruction and delivery of programs and services,and supports the development of educational television and radio programming for children and for the training of parents. (4) The Division of Follow Through supports demonstration projects which provide comprehensive services--education, nutrition, health care, and social and psychological services--designed to sustain and supplement in the primary grades the gains made by low-income children who participated in a Head Start or comparable preschool program. (5) State and Local Educational Programs strives to improve the educational services provided to students enrolled in the nation's elementary and secondary schools. These programs provide assistance to state and local education agencies through legislative resources (authorized by 15 legislative acts) and the tools developed to meet the special needs of various education agencies. (6) Packaging and Dissemination is in charge of national diffusion networks and other diffusion/dissemination activities, such as PIP (Product Information Packages). (7) The Office of Drug Education, Nutrition and Health Programs sponsors training teams for drug education and technical assistance. Other major emphases include the delivery of education and other services (i.e., school lunches, nutrition supplements and health services). (8) The Division of Equal Educational Opportunity funds special projects that are centrally administered Emergency School Aid (ESA) programs. These include desegregation assistance projects and educational television projects. (9) The Office of Libraries and Learning Resources has a mandate to effect better coordination and utilization of the nation's libraries and instructional resources to enhance learning and improve information services for children, college students and adults.

Distribution of FY '76 Early Childhood Activity

Figure 23 reflects the emphasis on development and demonstration of educational techniques and programs which characterizes the research conducted at the Bureau of Elementary and Secondary Education. The highest concentration of research activity is seen in the following areas: insruction (100%), teaching techniques (84%), curriculum (88%), and training (82%). Parent involvement (81%) is also a key ingredient in many BESE projects.

The substantial amount of activity relating to health services (57%) reflects the health and nutrition components of Follow Through programs.

Within the instructional techniques, individualized instruction (71%) and tutorial instruction (4%) receive the most attention. Table 76 displays the distribution of projects on educational curricula with the heaviest concentration seen in the following areas: language arts (72%), math (65%) and health education (58%).

As might be expected, the school (85%) is the most common research setting. (See Table 77).

Figure 23

Distribution of BESE FY '76 Early Childhood Research Projects, By Area of Research (N=264)

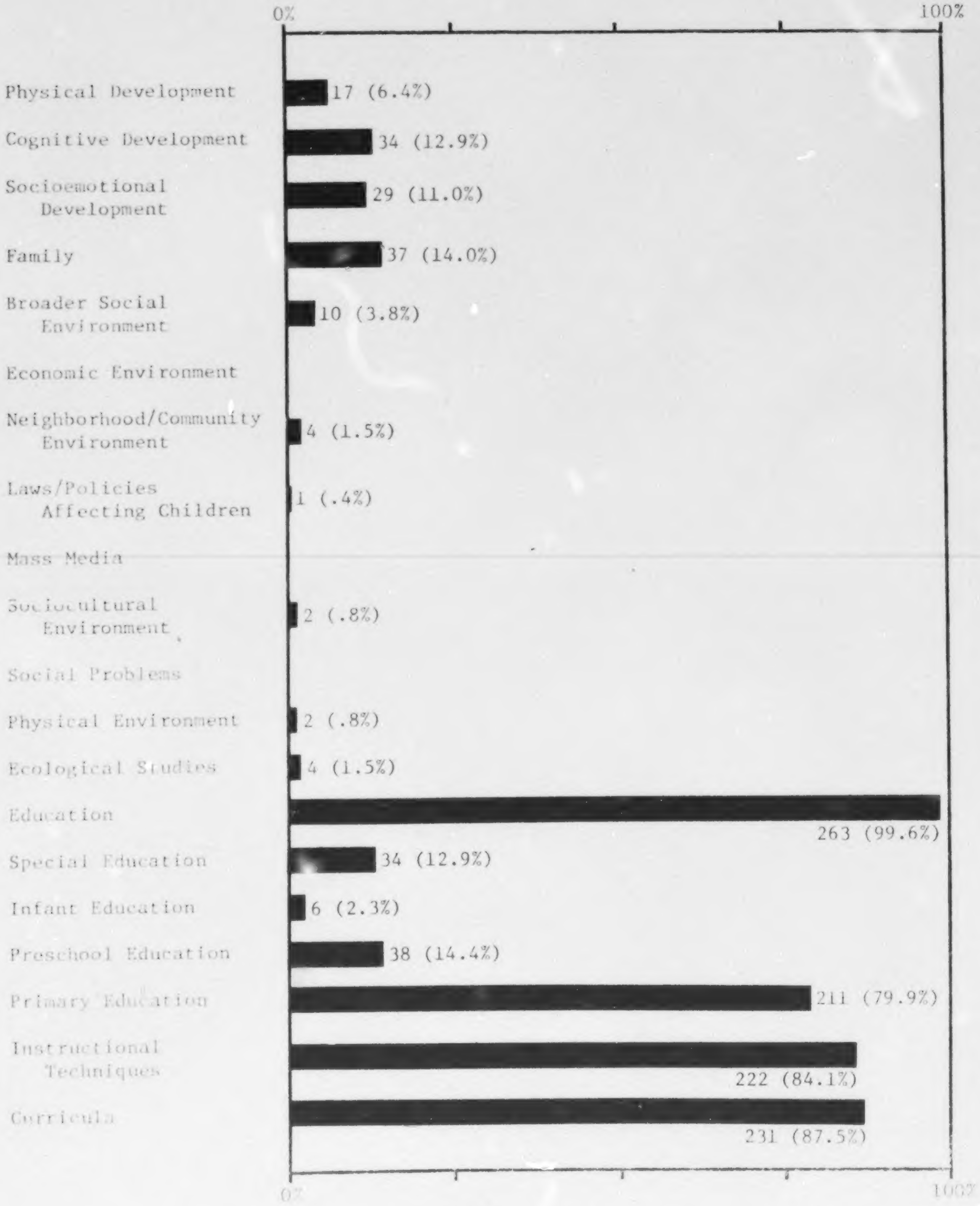
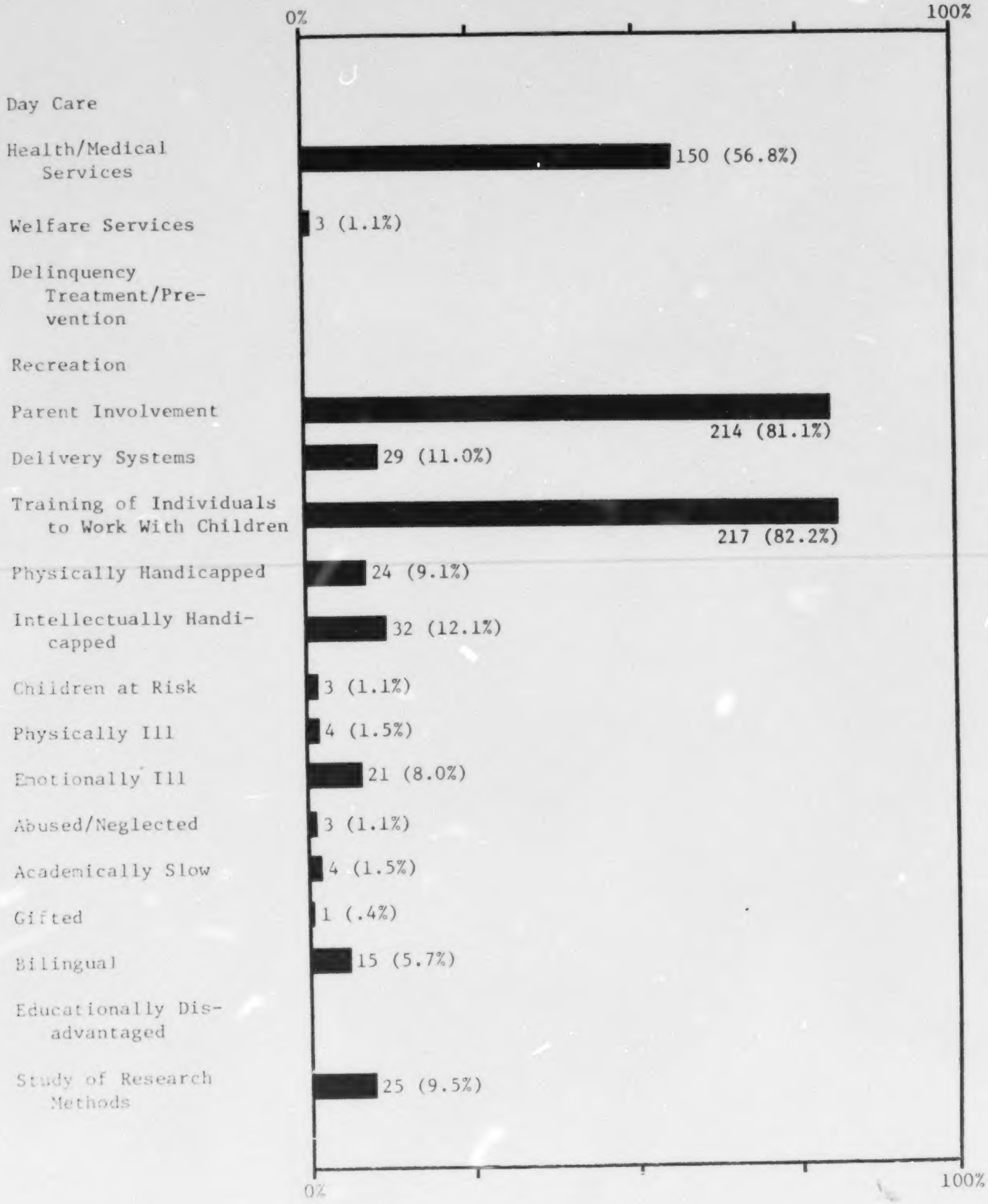


Figure 23 (Continued)

Distribution of BESE FY '76 Early Childhood Research Projects, By Area of Research (N=264)



Note. Categories are not mutually exclusive.

Table 73

Breakdown of BESE FY '76 Early Childhood Research On Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	29	(11.0)
Perception of Self	11	(4.2)
Attitudes	7	(2.7)
Emotional Development	6	(2.3)
Interpersonal Relationships	5	(1.9)
Motivation	4	(1.5)
Development of Values/Morals	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '76 early childhood research (264 projects).

Table 74

Breakdown of BESE FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	37	(14.0)
Parental Behavior	10	(3.8)
Parent-Child Relationships	7	(2.7)
Family Health	6	(2.3)
Child Rearing	2	(.8)
Family Structure	1	(.4)
Working Mother	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '76 early childhood research (264 projects).

Table 75

Breakdown of BESE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	222	(84.1)
Individualized Instruction	188	(71.2)
Tutorial Instruction	11	(4.2)
Team Teaching	9	(3.4)
Television Instruction	6	(2.3)
Volunteer Community Service	6	(2.3)
Open Classroom	4	(1.5)
Nongraded Instruction	4	(1.5)
Bilingual Instruction	3	(1.1)
Peer Teaching	3	(1.1)
Cross-age Teaching	2	(.8)
Voucher System	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '76 early childhood research (264 projects).

Table 76

Breakdown of BESE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	231	(87.5)
Language Arts	189	(71.6)
Math	172	(65.2)
Health Education	154	(58.3)
Reading	27	(10.2)
Science	8	(3.0)
Cultural Awareness	7	(2.7)
Fine Arts Education	6	(2.3)
Environmental Studies	6	(2.3)
Social Studies	5	(1.9)
Career Education	5	(1.9)
Vocational/Technical Education	3	(1.1)
Education for Parenthood	3	(1.1)
Sex Education	1	(.4)
Citizenship Training	1	(.4)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '76 early childhood research (264 projects).

Table 77

Distribution of BESE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	225	(85.2)
Home	38	(14.4)
Group Care Center	5	(1.9)
Community Center	5	(1.9)
Residential Institution	4	(1.5)
Medical Clinic	2	(.8)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BESE FY '76 early childhood research (264 projects).

Bureau of Occupational and Adult Education
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $2.6 million
- Number of Early Childhood Research Projects Active in FY '76: 80
- Mission and/or Functions in Early Childhood Research:

Goals of the BOAE Center for Adult, Vocational, Technical, and Manpower Education include the improvement and expansion of vocational educational guidance, counseling, placement, and follow-up systems, the improvement and expansion of cooperative education, and increasing the integration of handicapped students into vocational educational programs. The research and development program in vocational education begins at the elementary school level and includes children nine and younger as well as adolescents. Other divisions of BOAE which are reported are Metric Education and Consumers Education.

Distribution of FY '76 Early Childhood Activity

Although the bulk of BOAE's research efforts are targeted toward adolescents and adults, some research is supported in career education for elementary school children. All of the BOAE early childhood projects focus on instruction and educational curricula. Considerable attention is given in particular to mathematics (43%) and vocational education (44%). Other areas of primary concern include the study of delivery systems (55%) and the training of individuals to work with children (56%).

Plans for FY '77

According to BOAE materials, the agency's tentative priorities for FY '77 pertinent to early childhood research include the improvement of access to vocational education for all students. Implicit in this commitment is a high level of interest in children with the following characteristics: students having limited English-speaking ability, migrants, students in correctional institutions, the handicapped, students in inner city areas, and students in rural areas.

Additional priority will be given to: eliminating sex role stereotyping and sex bias in vocational education programs, education and work programs; and curriculum management and instructional materials in vocational education. The latter will include attention to newly emerging occupations, individualized instructional programs, alternate instructional delivery systems, and elimination of sex role stereotyping in instructional materials.

BOAE further intends to improve vocational guidance services, including placement services for students and out-of-school youth.

Figure 24

Distribution of BOAE FY '76 Early Childhood Research Projects, By Area of Research (N=80)

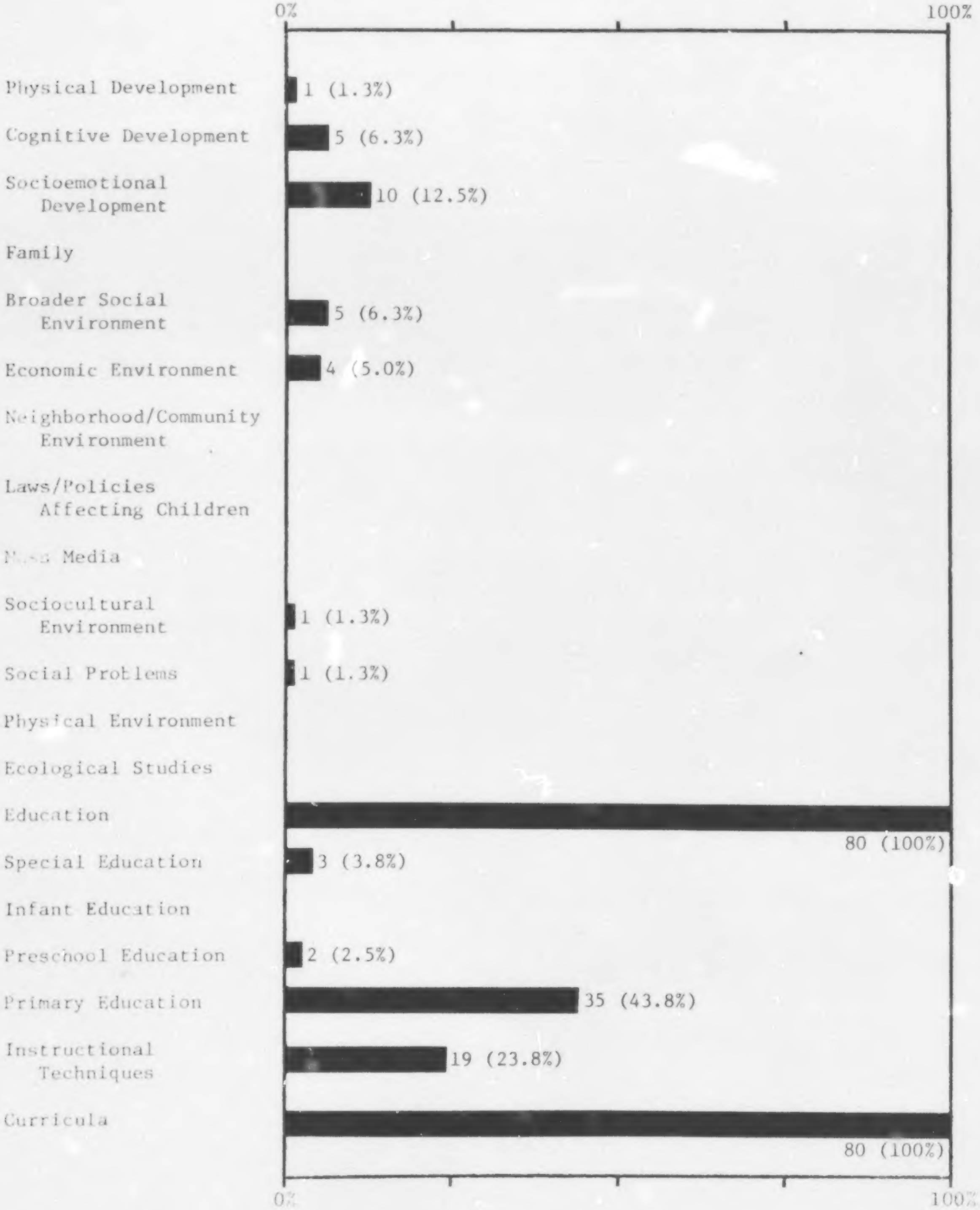
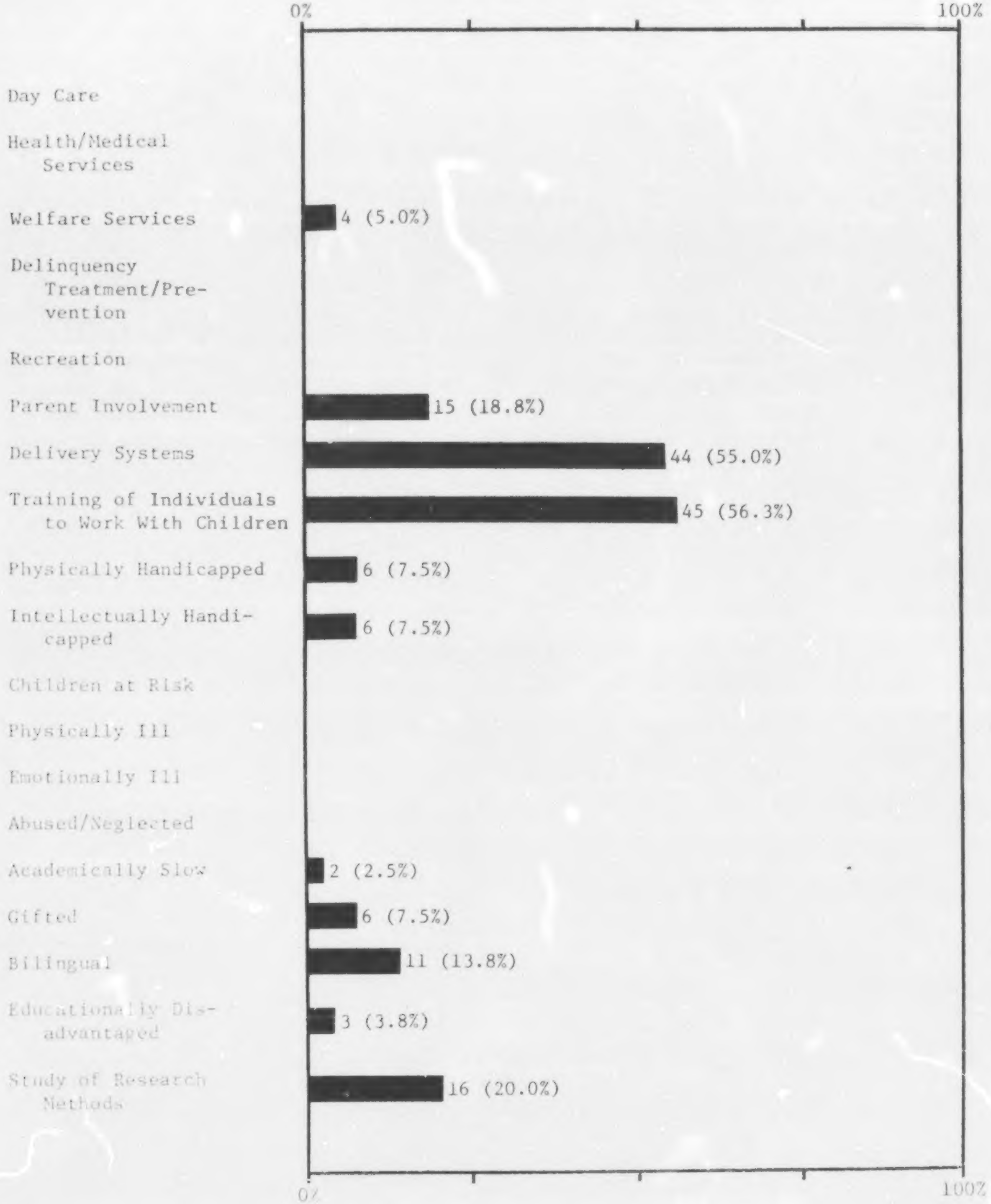


Figure 24 (Continued)

Distribution of BOAE FY'76 Early Childhood Research Projects, By Area of Research (N=80)



Note. Categories are not mutually exclusive.

Table 78

Breakdown of BOAE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	19	(23.8)
Individualized Instruction	8	(10.0)
Bilingual Instruction	8	(10.0)
Tutorial Instruction	1	(1.3)
Team Teaching	1	(1.3)
Peer Teaching	1	(1.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BOAE FY '76 early childhood research (80 projects).

Table 79

Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	80	(100.0)
Vocational/Technical Education	35	(43.8)
Math	34	(42.5)
Career Education	13	(16.3)
Language Arts	2	(2.5)
Cultural Awareness	1	(1.3)
Citizenship Training	1	(1.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total BOAE FY '76 early childhood research (80 projects).

Table 80

Distribution of BOAE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	33	(41.3)
Sheltered Workshop	4	(5.0)
Residential Institution	1	(1.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects

[a] Percentage of BOAE FY '76 early childhood research (80 projects).

Division of International Education
Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $.8 million
- Number of Early Childhood Research Projects Active in FY '76: 23
- Mission and/or Functions in Early Childhood Research:

The Division of International Education (DIE) of the U.S. Office of Education (OE) plans and administers a variety of training, institutional development, and research programs and services to expand and improve the international dimensions of American education. While each program has its specific focus, the emphasis in most programs is on foreign language and area studies and the non-Western world. The DIE also administers ethnic heritage studies programs, which seek to develop intercultural understanding within this country, and provides a variety of staff services in the field of international education. The Ethnic Heritage Studies program provides grants to non-profit private and public educational agencies, institutions, or organizations to assist individuals in understanding their own heritage and the heritages of other groups, through curriculum materials development or dissemination, teacher training, and community activities.

Distribution of FY '76 Early Childhood Activities

Figure 25 reflects the mission of the Division of International Education, with a heavy concentration of support apparent for the study of curricula (83%). As can be seen in Table 82, no specific subject matter, such as math or history, is identified in the DIE project proposals. A high percentage of them pertain, however, to the development of cultural awareness. Most of the projects are undertaken in a school setting.

Figure 25

Distribution of DIE FY '76 Early Childhood Research Projects, By Area of Research (N=23)

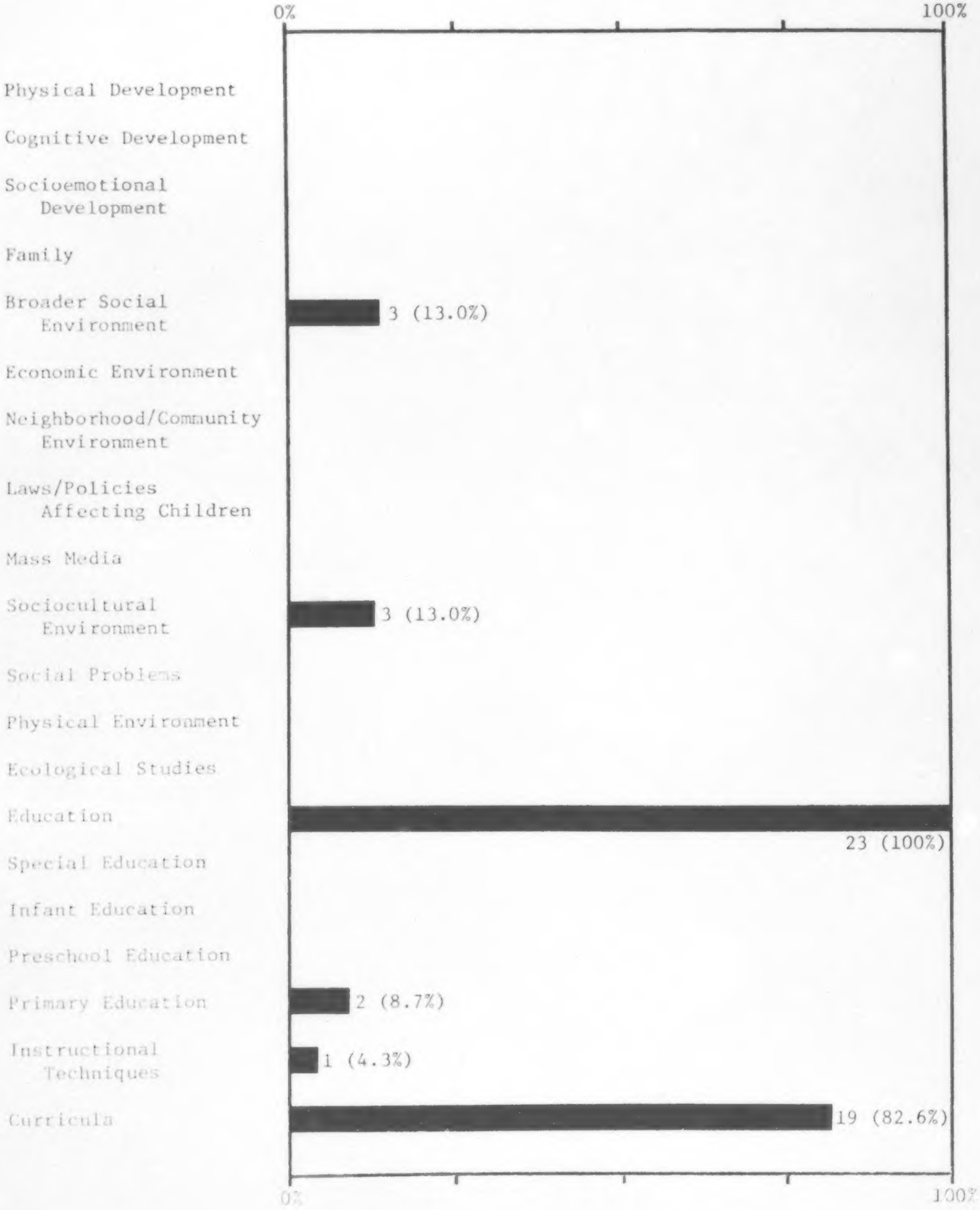
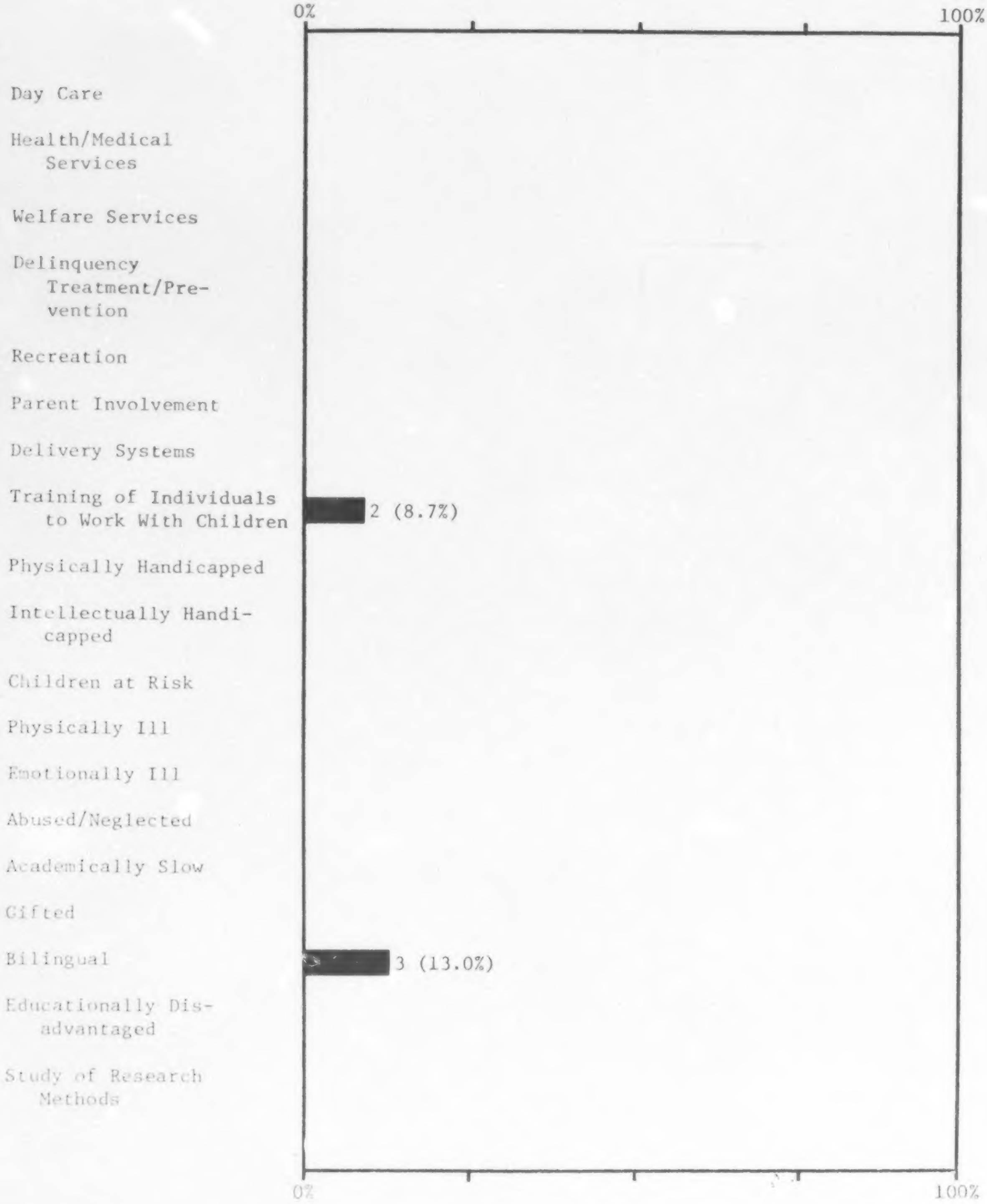


Figure 25 (Continued)

Distribution of DIE FY '76 Early Childhood Research Projects, By Area of Research (N=23)



Note. Categories are not mutually exclusive.

Table 81

Breakdown of DIE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	1	(4.3)
Television Instruction	1	(4.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total DIE FY '76 early childhood research (23 projects).

Table 82

Breakdown of DIE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	19	(82.6)
Cultural Awareness	16	(69.6)
Vocational/Technical Education	1	(4.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total DIE FY '76 early childhood research (23 projects)

Table 83

Distribution of DIE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	19	(82.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total DIE FY '76 early childhood research (23 projects).

Office of Bilingual Education
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $59.6
- Number of Early Childhood Research Projects Active in FY '76: 431
- Mission and/or Function in Early Childhood Research:

The Office of Bilingual Education, funded under Title VII, develops and operates bilingual programs aimed at meeting the special educational needs of children who come from environments where the dominant language is not English and who have limited English-speaking ability. Children speaking Indo-European, Asian-Pacific, Native American, and Eskimo languages are served. Curriculum development, staff training and parent and community involvement are important aspects of the Division's projects. The grants funded under ESEA Title VII for bilingual education are to be used to provide equal education opportunities through basic educational programs at the elementary levels for students and training programs for teachers. The Office operates a network of centers which develop, disseminate and field test curriculum materials for use in the classroom.

Distribution of FY '76 Early Childhood Activity

Figure 26 gives an accurate picture of the multi-faceted approach which characterizes OBE projects. They focus primarily on the following research areas: instruction (100%), curriculum (99%), parent involvement (93%) and training (98%). Additional foci of OBE research are the cognitive (55%) and social-emotional (59%) development of the children enrolled in bilingual education programs. Not surprisingly, the two principal areas of investigation within cognitive development (Table 84) are cognitive achievement and language development. Table 86 shows that the projects involve a wide array of the traditional subject matters, such as language arts, reading, math, social studies, science, and fine arts. Health education and physical education also figure in a number of projects.

Figure 26

Distribution of OBE FY '76 Early Childhood Research Projects, By Area of Research (N=431)

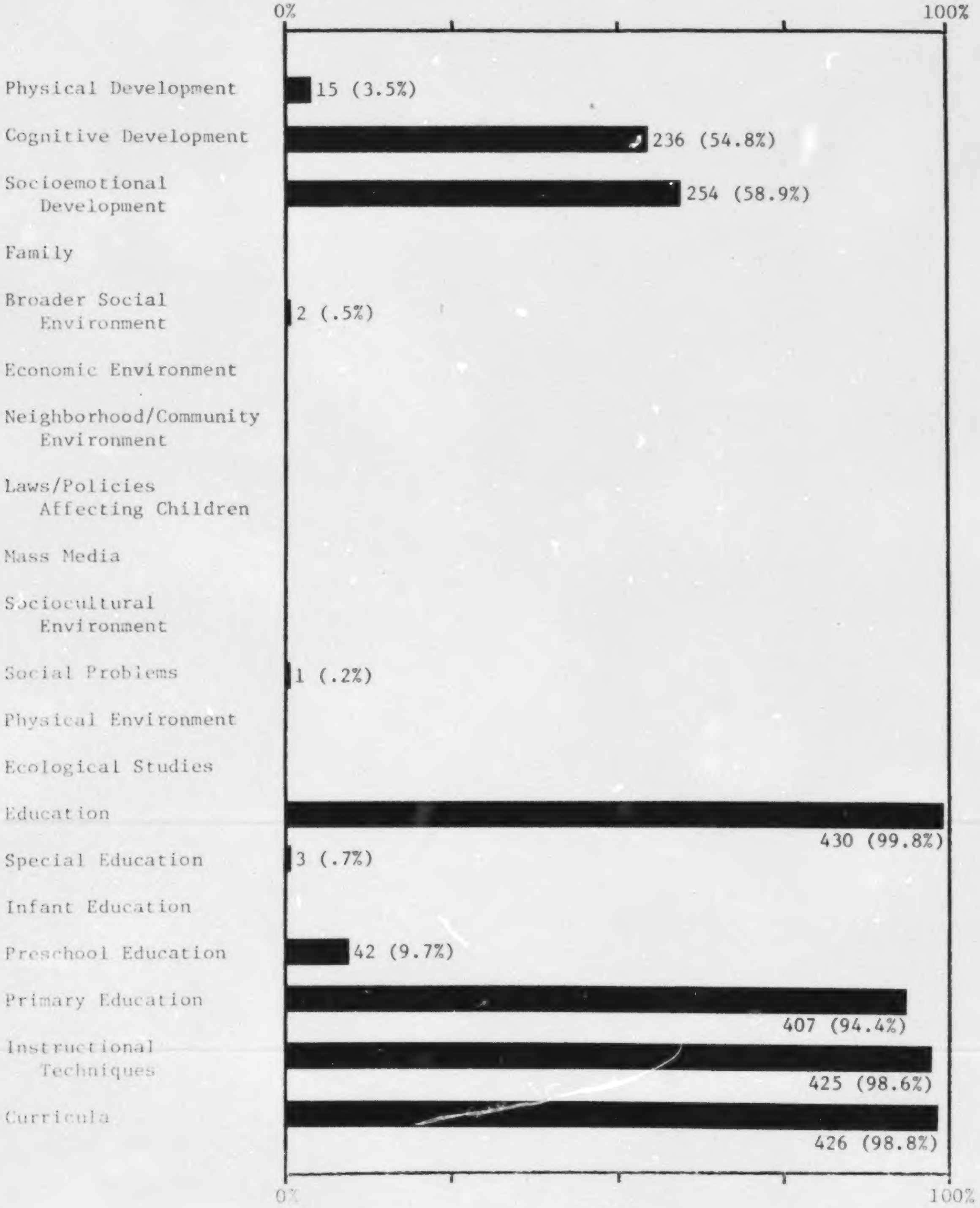
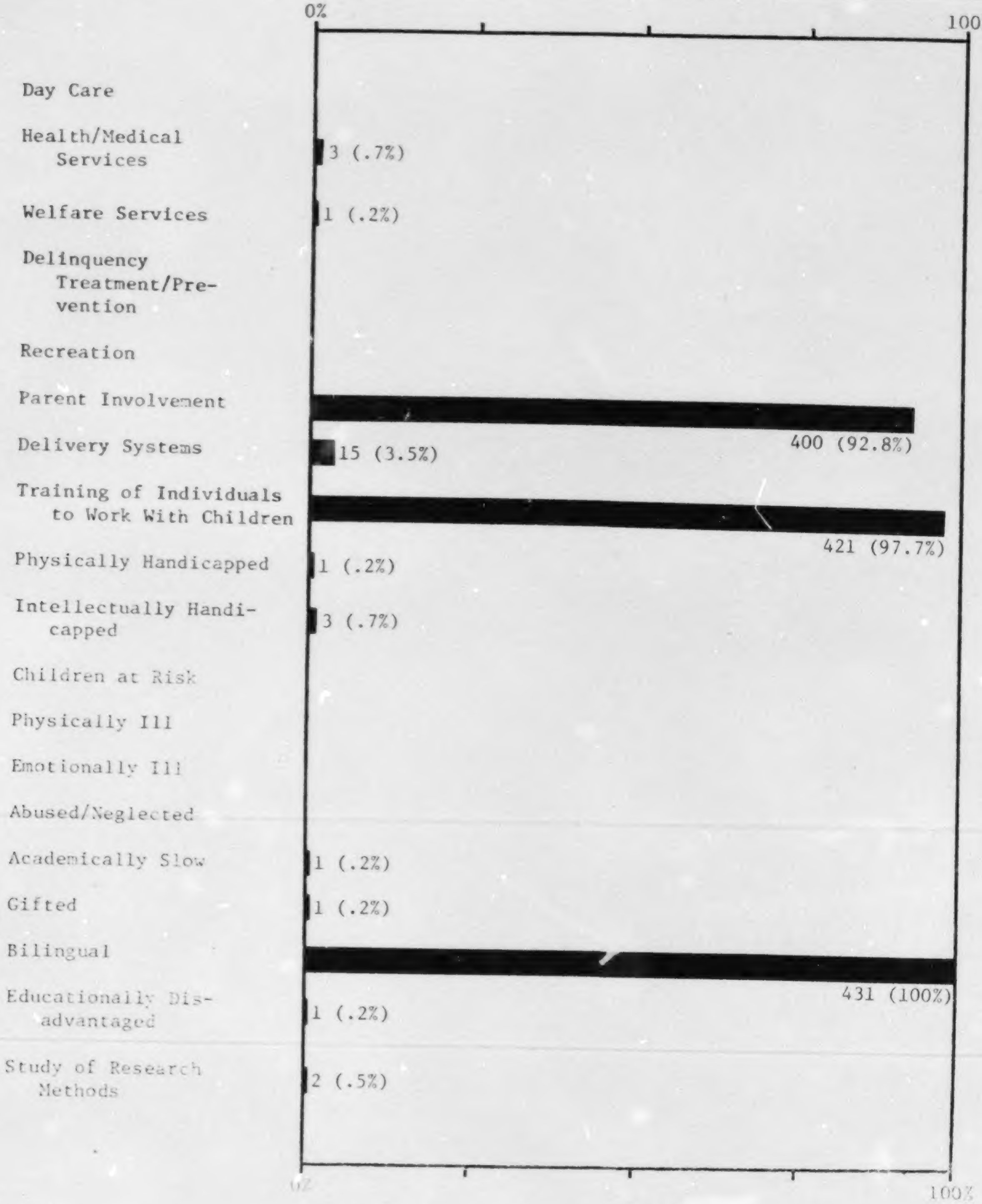


Figure 26 (Continued)

Distribution of OBE FY '76 Early Childhood Research Projects, By Area of Research (N=431)



Note. Categories are not mutually exclusive.

Table 84

Breakdown of OBE FY '76 Early Childhood Research Projects On Cognitive Development

Category	No.	%[a]
Total Research on Cognitive Development	236	(54.8)
Cognitive Achievement	178	(41.3)
Language Development	143	(33.2)
Perception	16	(3.7)
Problem Solving	5	(1.2)
Reading	4	(.9)
Memory	2	(.5)
Creativity	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '76 early childhood research (431 projects).

Table 85

Breakdown of OBE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	425	(98.6)
Bilingual Instruction	423	(98.1)
Individualized Instruction	79	(18.3)
Tutorial Instruction	28	(6.5)
Team Teaching	27	(6.3)
Open Classroom	16	(3.7)
Peer Teaching	11	(2.6)
Cross-age Teaching	6	(1.4)
Nongraded Instruction	4	(.9)
Television Instruction	3	(.7)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '76 early childhood research (431 projects).

Table 86

Breakdown of OBE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	426	(98.8)
Language Arts	420	(97.4)
Reading	407	(94.4)
Cultural Awareness	394	(91.4)
Math	302	(70.1)
Social Studies	250	(58.0)
Science	145	(33.6)
Fine Arts Education	82	(19.0)
Physical Education	46	(10.7)
Health Education	22	(5.1)
Career Education	13	(3.0)
Vocational/Technical Education	8	(1.9)
Environmental Studies	3	(.7)
Education for Parenthood	2	(.5)
Drug Abuse Education	1	(.2)
Sex Education	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '76 early childhood research (431 projects).

Table 87

Distribution of OBE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	421	(97.7)
Home	3	(.7)
Community Center	1	(.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OBE FY '76 early childhood research (431 projects).

Office of Career Education
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $3.6 million
- Number of Early Childhood Research Projects Active in FY '76: 33
- Mission and/or Function in Early Childhood Research:

In Section 406 of the Educational Amendments Act of 1974 (PL 93-380), the USOE is called upon to support exemplary models and programs of career education; this is now being accomplished through the Office of Career Education. The Office provides grants for nonprofit making corporations, universities and colleges, and state or local authorities to develop career awareness curriculum for primary school children and career experiences for adolescents.

Distribution of FY '76 Early Childhood Activity

Figure 27 reflects the aim of the Office of Career Education to develop specialized curricula (100%) and instructional techniques (61%) in career education for the primary grades (91%). An additional goal of this effort is to develop the participants' self-awareness of their own potential and abilities, which is reflected in the high level of activity in socioemotional development (82%). Table 88 shows the distribution of research activity within the area of socioemotional development; attitudes (76%), self-perception (27%), and motivation (27%) are the categories which receive the most attention in this category.

Plans for FY '77

The Office of Career Education indicates a continuing high level of interest in education programs which offer career awareness components. Along this line, OCE will support conferences and state-of-the-arts papers related to career education. There are also plans to reach a wide range of target populations including minority groups, gifted and handicapped children, as well as school age children of average ability. A low level of interest is shown for family-related issues such as family functioning, the structure of the family, ecology of the home and the family's interface with society.

Figure 27

Distribution of OCE FY '76 Early Childhood Research Projects, By Area of Research (N=33)

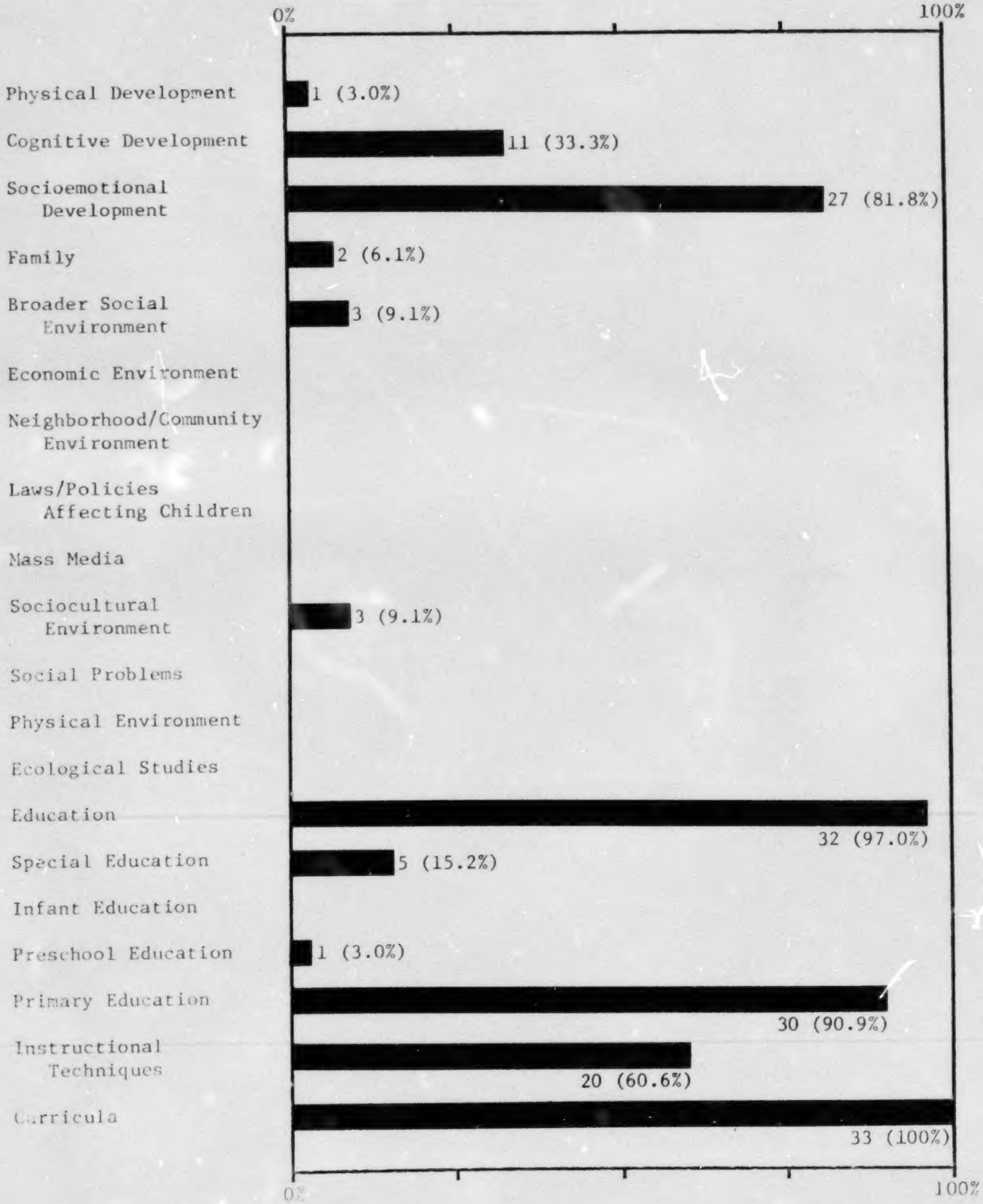
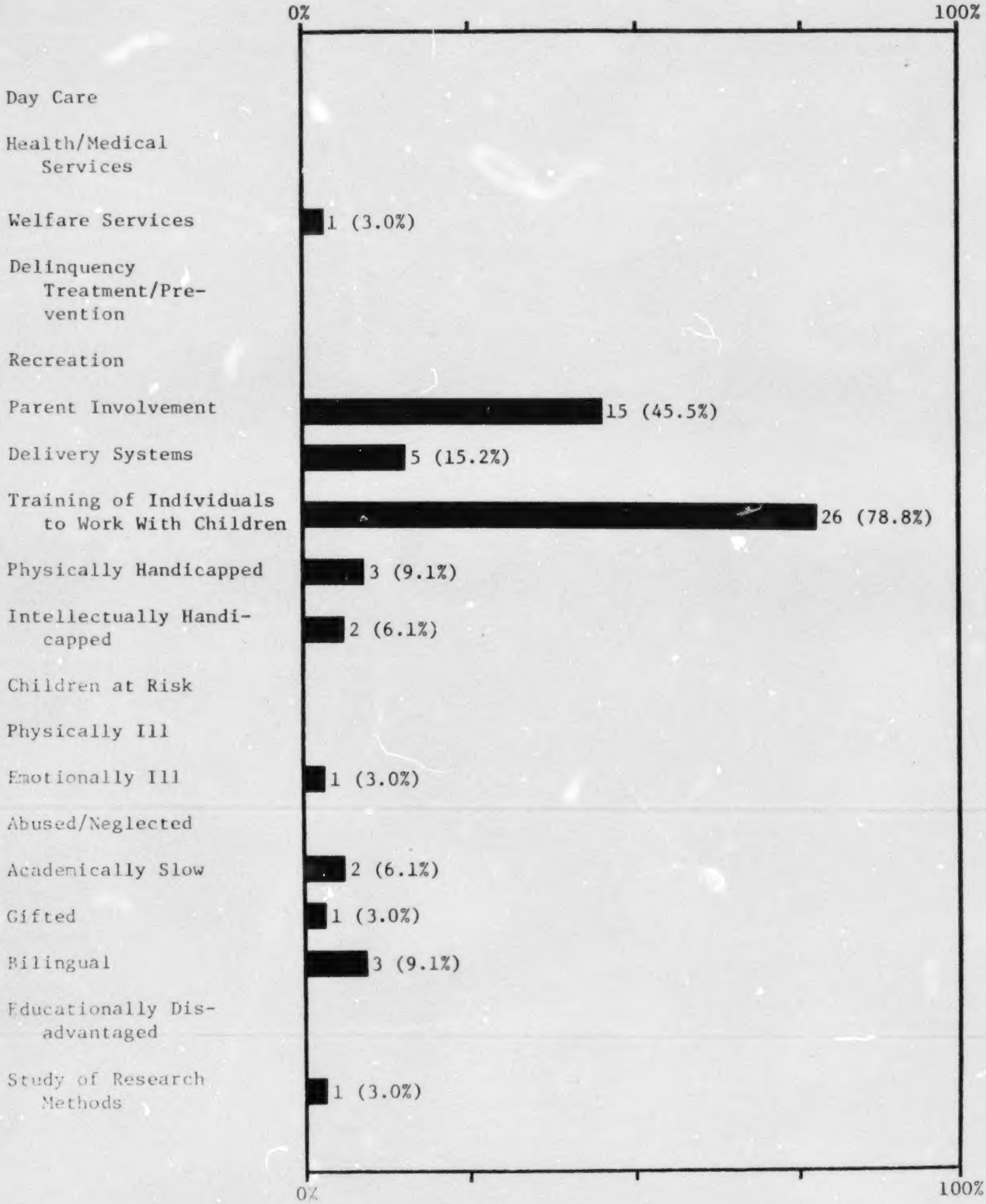


Figure 27 (Continued)

Distribution of OCE FY '76 Early Childhood Research Projects, By Area of Research (N=33)



Note. Categories are not mutually exclusive.

Table 88

Breakdown of OCE FY '76 Early Childhood Research Projects on Socioemotional Development

Category	No.	%[a]
Total Research on Socioemotional Development	27	(81.8)
Attitudes	25	(75.8)
Perception of Self	9	(27.3)
Motivation	9	(27.3)
Interpersonal Relationships	5	(15.2)
Development of Values/Morals	4	(12.1)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '76 early childhood research (33 projects).

Table 89

Breakdown of OCE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	20	(60.6)
Individualized Instruction	4	(12.1)
Volunteer Community Service	4	(12.1)
Bilingual Instruction	3	(9.1)
Television Instruction	3	(9.1)
Nongraded Instruction	2	(6.1)
Tutorial Instruction	1	(3.0)
Open Classroom	1	(3.0)
Team Teaching	1	(3.0)
Cross-age Teaching	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '76 early childhood research (33 projects).

Table 90

Breakdown of OCE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curriculum	33	(100.0)
Career Education	32	(97.0)
Vocational/Technical Education	7	(21.2)
Language Arts	2	(6.1)
Reading	2	(6.1)
Math	2	(6.1)
Science	2	(6.1)
Cultural Awareness	1	(3.0)
Social Studies	1	(3.0)
Environmental Studies	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '76 early childhood research (33 projects).

Table 91

Distribution of OCE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	30	(90.9)
Place of Employment	2	(6.1)
Home	1	(3.0)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OCE FY '76 early childhood research (33 projects).

Office of Indian Education
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $10.3 million
- Number of Early Childhood Research Projects Active in FY '76: 161
- Mission and/or Function in Early Childhood Research:

The mission of the Office of Indian Education is to fund the development and demonstration of early childhood education models designed to meet the special needs of Indian children from age three through third grade. The projects include day care centers with educational components, curriculum development and bilingual and bicultural education programs.

Distribution of FY '76 Early Childhood Activity

As can be seen from Figure 28, a major emphasis in the Office of Indian Education's FY '76 research and demonstration projects is on the delivery of services, particularly educational services (98%). A preponderance of projects (98%) are involved with the development or demonstration of educational curricula. For example, considerable focus is given to both cultural awareness and language curricula (75% and 53%, respectively).

Many of the projects are concerned with the use of innovative teaching techniques (63%), particularly tutorial education (31%), bilingual education (27%) and individualized instruction (18%). Parent involvement and training of personnel are additional components in many of these demonstration projects. Program impact is generally measured in terms of cognitive, social-emotional, or physical gains (40%, 48%, 12%, respectively).

Table 96 shows that OIE projects are undertaken in a variety of settings: school, community center, home, group care center, residential institution, and sheltered workshop.

Plans for FY '77

For FY '77, OIE indicates an increased emphasis on target populations of physically handicapped, retarded, and learning disabled children, and a continuing high level of interest in academically slow and bilingual populations.

These populations will continue to be from native American reservations and rural locations. Socioemotional and cognitive development will continue to be moderately emphasized areas with increased attention to language development. A higher level of activity is indicated for the area of family research, including family structure, functions and parenting skills. The local environment remains of high interest. Decreased emphasis will be placed on mass media, open classrooms and contract teaching but increased emphasis will be placed on career and guidance counseling. In the area of research on research methodology, more attention will go to program evaluation methods.

Figure 28

Distribution of OIE FY '76 Early Childhood Research Projects, By Area of Research (N=161)

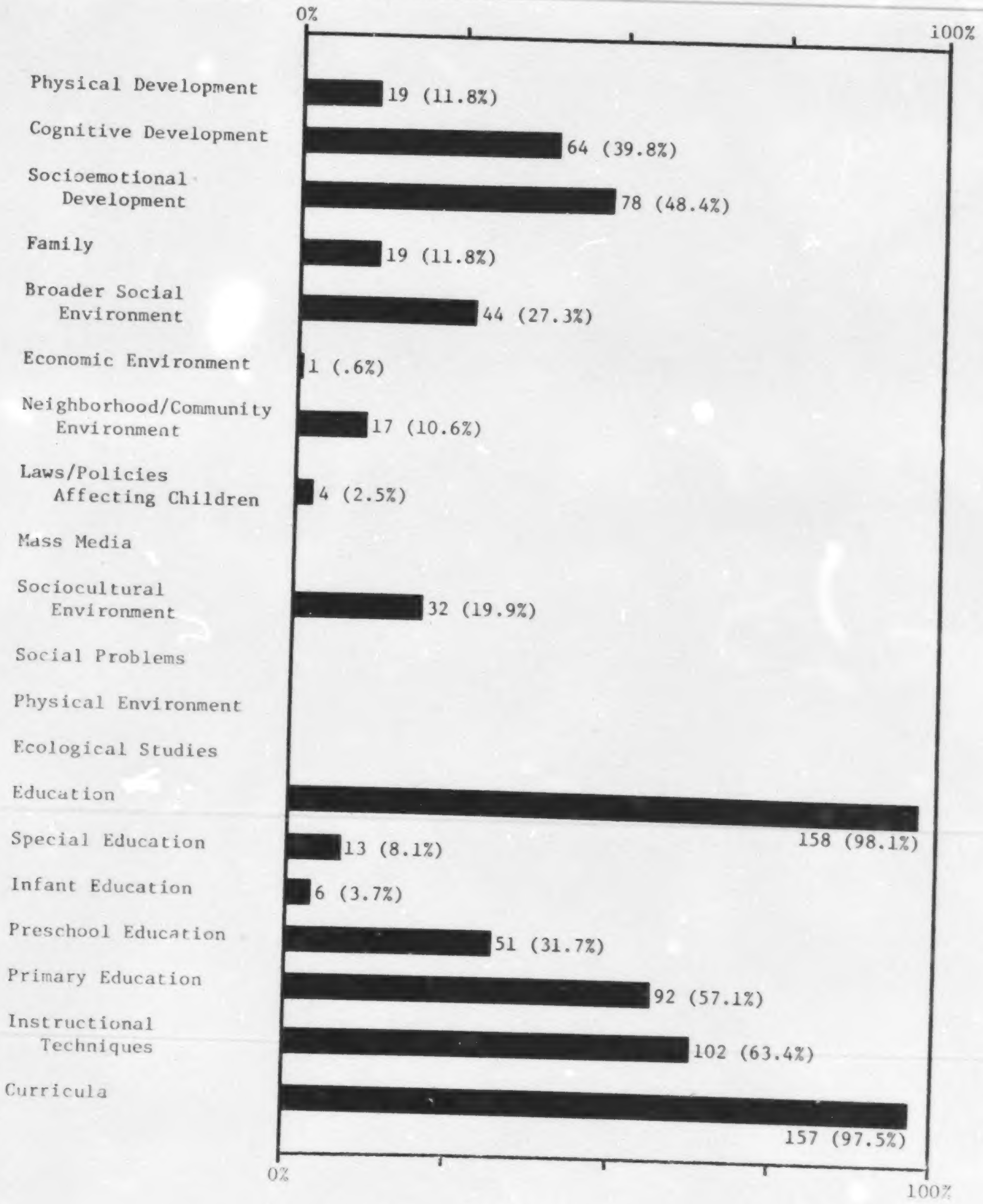
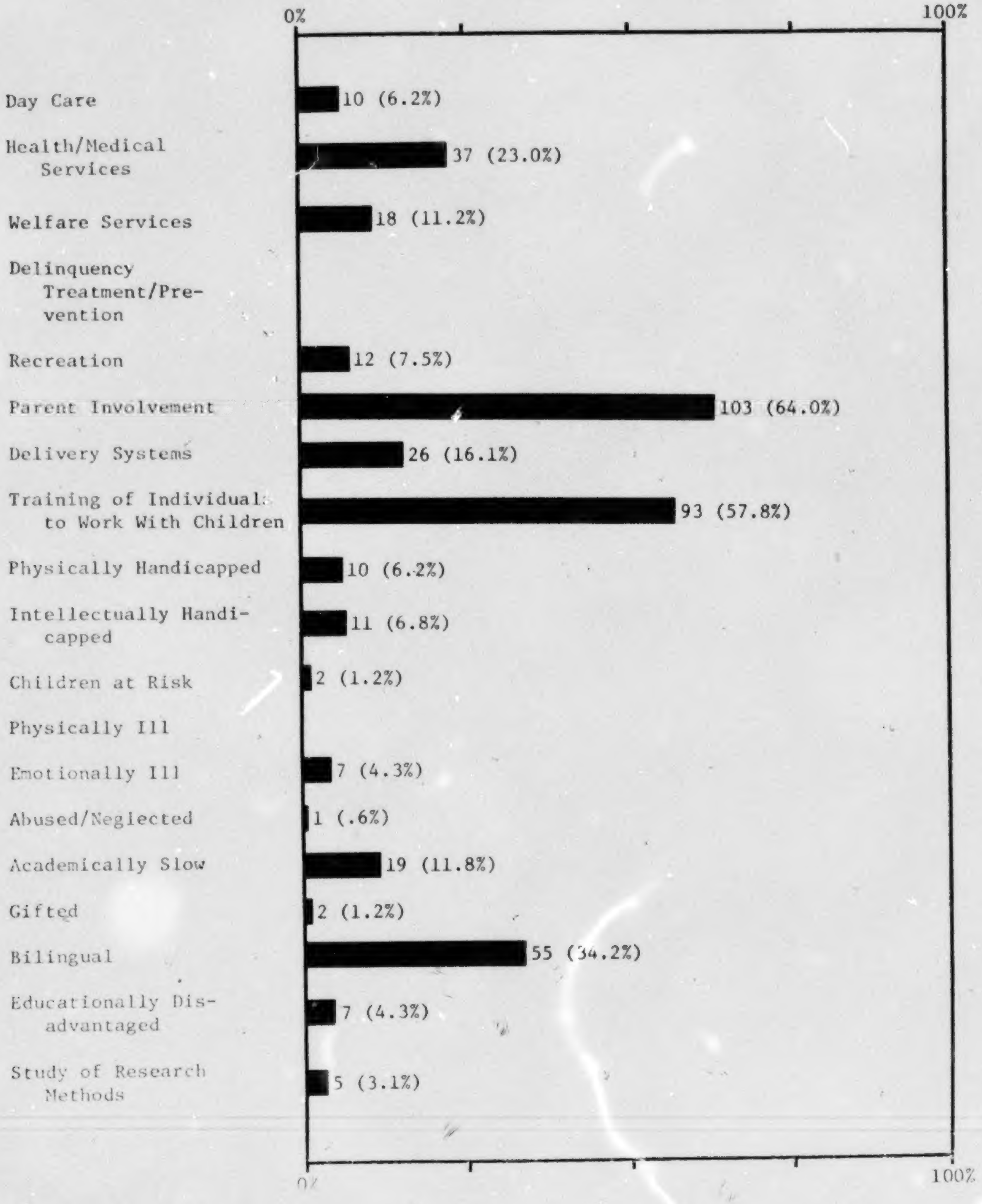


Figure 28 (Continued)

Distribution of OIE FY '76 Early Childhood Research Projects, By Area of Research (N=161)



Note. Categories are not mutually exclusive.

Table 92

Breakdown of OIE FY '76 Early Childhood Research Projects On Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Cognitive Development	64	(39.8)
Cognitive Achievement	34	(21.1)
Language Development	34	(21.1)
Perception	9	(5.6)
Reading	7	(4.3)
Problem Solving	5	(3.1)
Play	5	(3.1)
Learning Processes	4	(2.5)
Concept Formation	4	(2.5)
Intellectual Handicaps	1	(.6)
Creativity	1	(.6)
Total Research on Socioemotional Development	78	(48.4)
Perception of Self	69	(42.9)
Attitudes	21	(13.0)
Interpersonal Relationships	18	(11.2)
Emotional Development	10	(6.2)
Personality	7	(4.3)
Motivation	6	(3.7)
Development of Values/Morals	2	(1.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '76 early childhood research (161 projects).

Table 93

Breakdown of OIE FY '76 Early Childhood Research Projects on the Family

Category	No.	$\%^a$
Total Research on the Family	19	(11.8)
Parent-Child Relationships	6	(3.7)
Parental Behavior	4	(2.5)
Family Health	1	(.6)
Child Rearing	1	(.6)
Family Structure	1	(.6)
Family/Society Interface	1	(.6)
Sibling Relationships	1	(.6)
Child Care Arrangements	1	(.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of OIE FY '76 early childhood research (161 projects).

Table 94

Breakdown of OIE FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	$\%^a$
Total Research on Instructional Techniques	102	(63.4)
Tutorial Instruction	50	(31.1)
Bilingual Instruction	44	(27.3)
Individualized Instruction	29	(18.0)
Cross-age Teaching	16	(9.9)
Volunteer Community Service	13	(8.1)
Peer Teaching	4	(2.5)
Open Classroom	3	(1.9)
Television Instruction	3	(1.9)
Team Teaching	2	(1.2)
Voucher System	2	(1.2)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '76 early childhood research (161 projects).

Table 95

Breakdown of OIE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	157	(97.5)
Cultural Awareness	120	(74.5)
Language Arts	85	(52.8)
Reading	42	(26.1)
Math	41	(25.5)
Social Studies	31	(19.3)
Fine Arts Education	31	(19.3)
Health Education	18	(11.2)
Science	17	(10.6)
Career Education	15	(9.3)
Physical Education	13	(8.1)
Vocational/Technical Education	13	(8.1)
Education for Parenthood	12	(7.5)
Environmental Studies	5	(3.1)
Citizenship Training	5	(3.1)
Drug Abuse Education	4	(2.5)
Sex Education	1	(.6)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '76 early childhood research (161 projects).

Table 96

Distribution of OIE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	87	(54.0)
Community Center	34	(21.1)
Home	22	(13.7)
Group Care Center	14	(8.7)
Residential Institution	6	(3.7)
Sheltered Workshop	4	(2.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OIE FY '76 early childhood research (161 projects).

Office of Planning, Budgeting, and Evaluation
U.S. Office of Education, DHEW

- FY '76 Funding of Evaluations Related to Early Childhood: $8.6 million
- Number of Projects Related to Early Childhood Active in FY '76: 32
- Mission and/or Functions in Early Childhood:

This Office has primary responsibility for planning, budgeting, and evaluating programs administered by the Office of Education. These are Federal programs in elementary, secondary, post-secondary, vocational, career, and special education. OPBE helps the various organizational units of OE to establish program objectives and coordinates their planning and budgeting activities. It prepares analytical studies for developing educational policy and suggests the kinds of information to be collected for use in subsequent planning and evaluation activities. OPBE also prepares material supporting OE's five-year plan and its budget requests. However, a major emphasis is on evaluating OE programs through contracted projects which utilize research methodology.

Distribution of FY '76 Early Childhood Activity

As in previous years, OPBE devotes most of its FY '76 efforts toward the evaluation of major OE programs. Much of this attention is directed toward the impact of certain educational services, in particular educational curricula (41%) and instruction (84%). These programs are examined with respect to the effect they have upon various aspects of the child's development (See Figure 29.) An additional area of concern is the impact of various regulations and policies on the child (19%).

Plans for FY '77

In FY '77 OPBE will focus on many aspects of education: special education, preschool education, instructional techniques, curricula, bilingual instruction, teaching innovations, equipment and technical innovations, basic skills, desegregation and career awareness. Targeted populations will include minorities, gifted, handicapped, bilingual and learning disabled children. No funds are to be specifically allocated to research methodology, but efforts are made to keep on top of advancements in the field. OPBE will support studies of the dissemination and utilization of findings, as well as the development of information collection, processing and analysis systems.

Figure 29

Distribution of OPBE FY '76 Early Childhood Research Projects, By Area of Research (N=32)

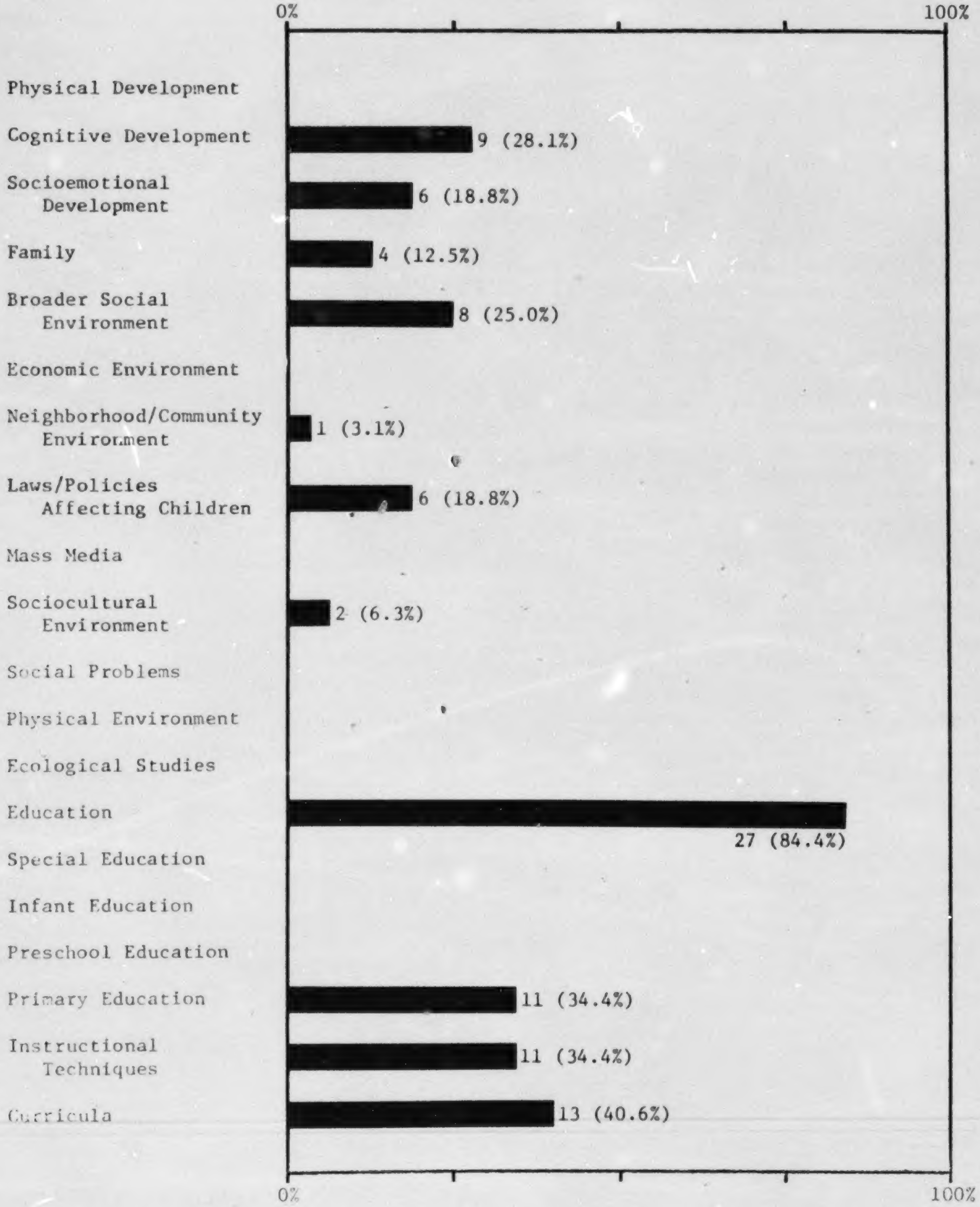
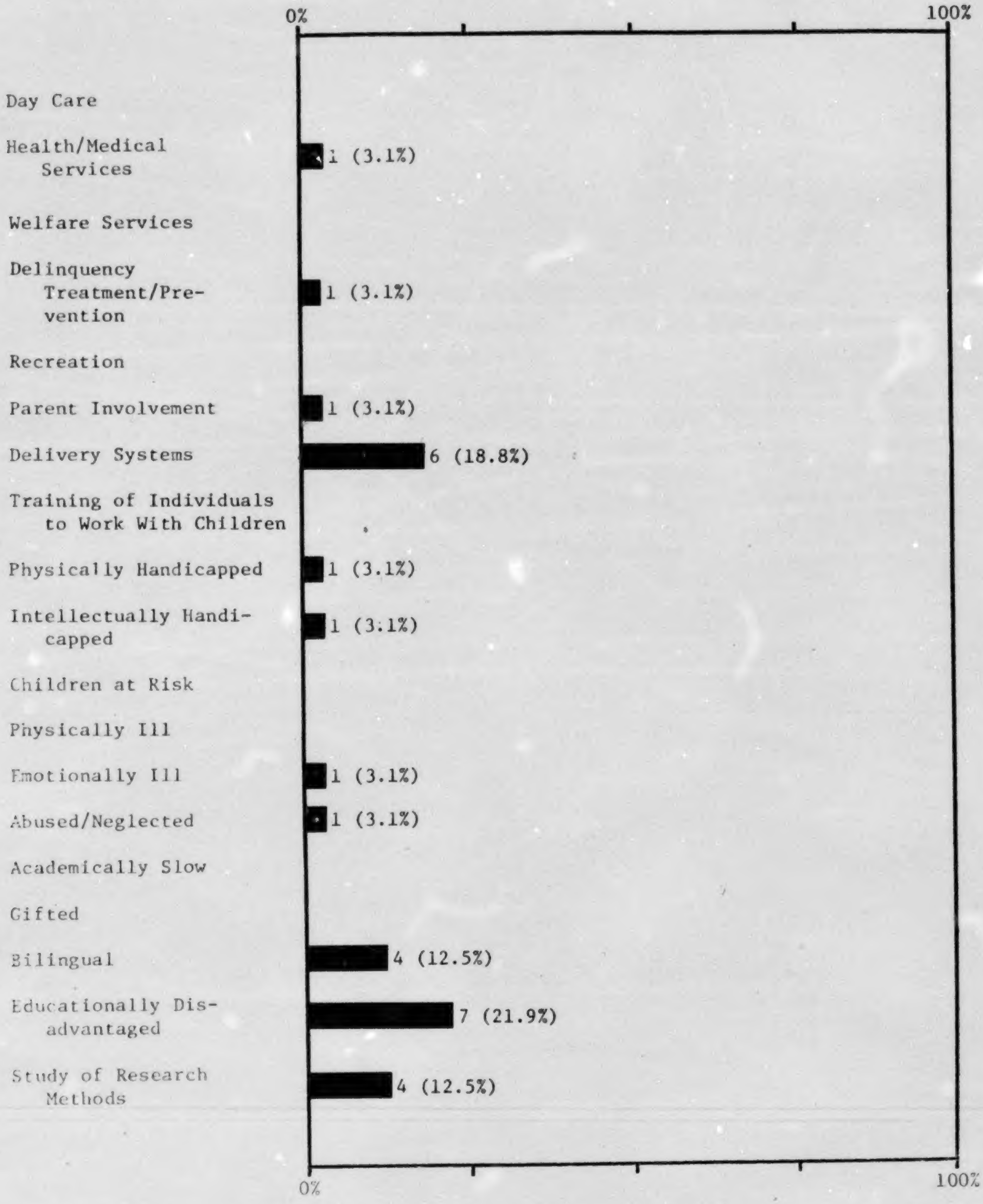


Figure 29 (Continued)

Distribution of OPBE FY '76 Early Childhood Research Projects, By Area of Research (N=32)



Note. Categories are not mutually exclusive.

Table 97

Breakdown of OPBE FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	13	(40.6)
Language Arts	3	(9.4)
Reading	3	(9.4)
Math	1	(3.1)
Cultural Awareness	1	(3.1)
Career Education	1	(3.1)
Vocational/Technical Education	1	(3.1)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OPBE FY '76 early childhood research (32 projects).

Table 98

Breakdown of OPBE FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	25	(78.1)
Residential Institution	2	(6.3)
Group Care Center	1	(3.1)
Community Center	1	(3.1)
Sheltered Workshop	1	(3.1)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total OPBE FY '76 early childhood research (32 projects).

Right to Read Effort
U.S. Office of Education, DHEW

- FY '76 Funding of Early Childhood Research: $12.6 million
- Number of Early Childhood Research Projects Active in FY '76: 214
- Mission and/or Functions in Early Childhood Research

The National Right to Read Effort focuses on the reading literacy problems in this country. The goal of this effort is to prevent functional illiteracy and to provide corrective remediation for those who are presently experiencing the results of being functionally illiterate. The Right to Read Effort supports innovative demonstration projects designed to promote effective state and local reading programs.

Distribution of FY '76 Early Childhood Activity

Consistent with its mandate to ameliorate illiteracy in this country, the Right to Read effort primarily funds demonstration projects, virtually all of which focus on curricula for reading instruction. Many of these projects (61%) promote innovative teaching techniques/learning conditions --of particular note are both individualized instruction (48%) and tutorial instruction (23%). Both of these techniques are used as methods to remediate functional illiteracy.

The Right to Read effort channels much of its activities in the direction of the academically slow (87%); emphasis is also on children in the primary grades (81%). In order to assess the relative effectiveness of the program, measures of cognitive gains are taken in 46% of the projects.

Other prominent features of the Right to Read effort include parental involvement (46%) and an emphasis on upgrading instructional services to children through the training of staff members (90%).

Figure 30

Distribution of Right to Read FY '76 Early Childhood Research Projects, by Area of Research (N=214)

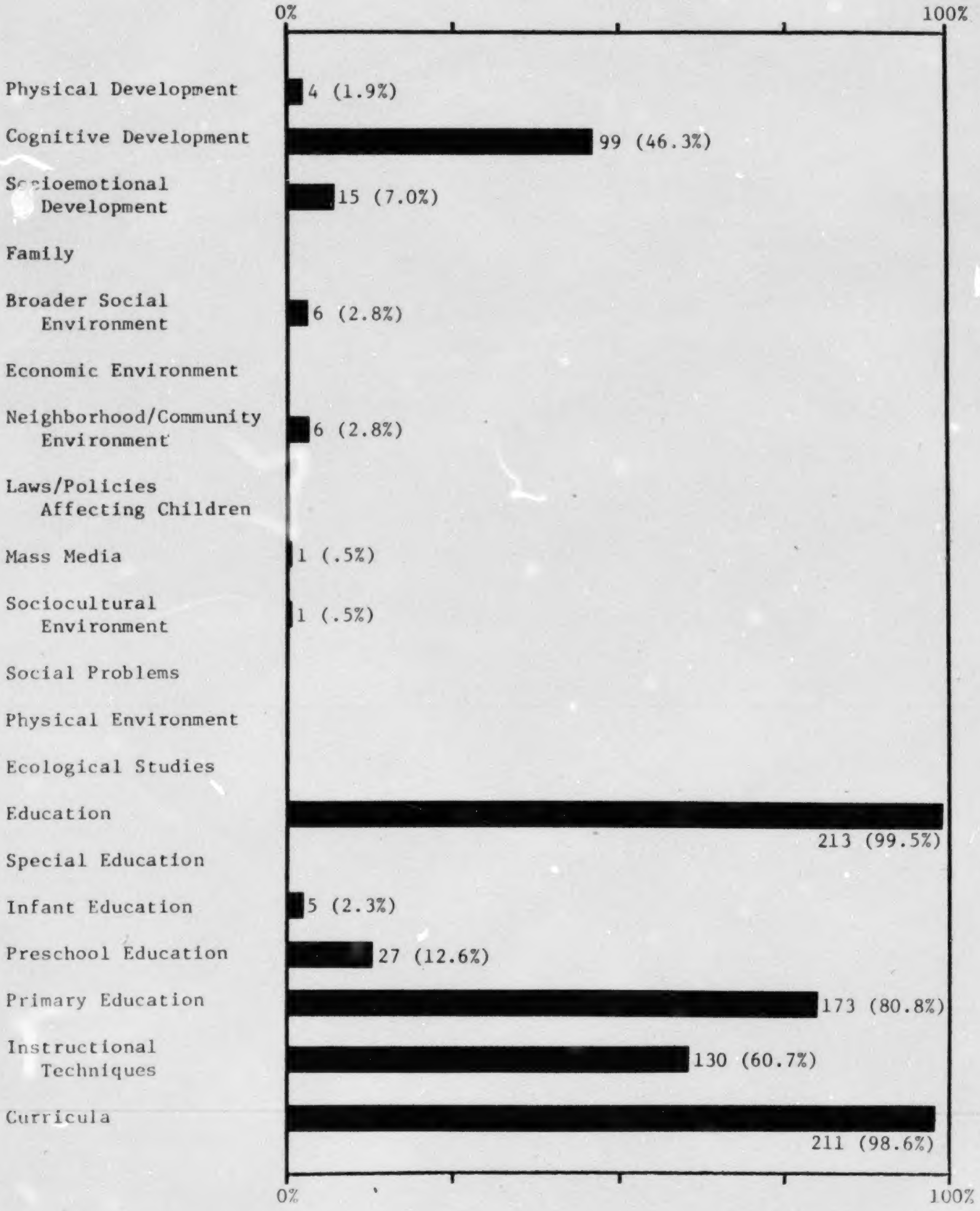
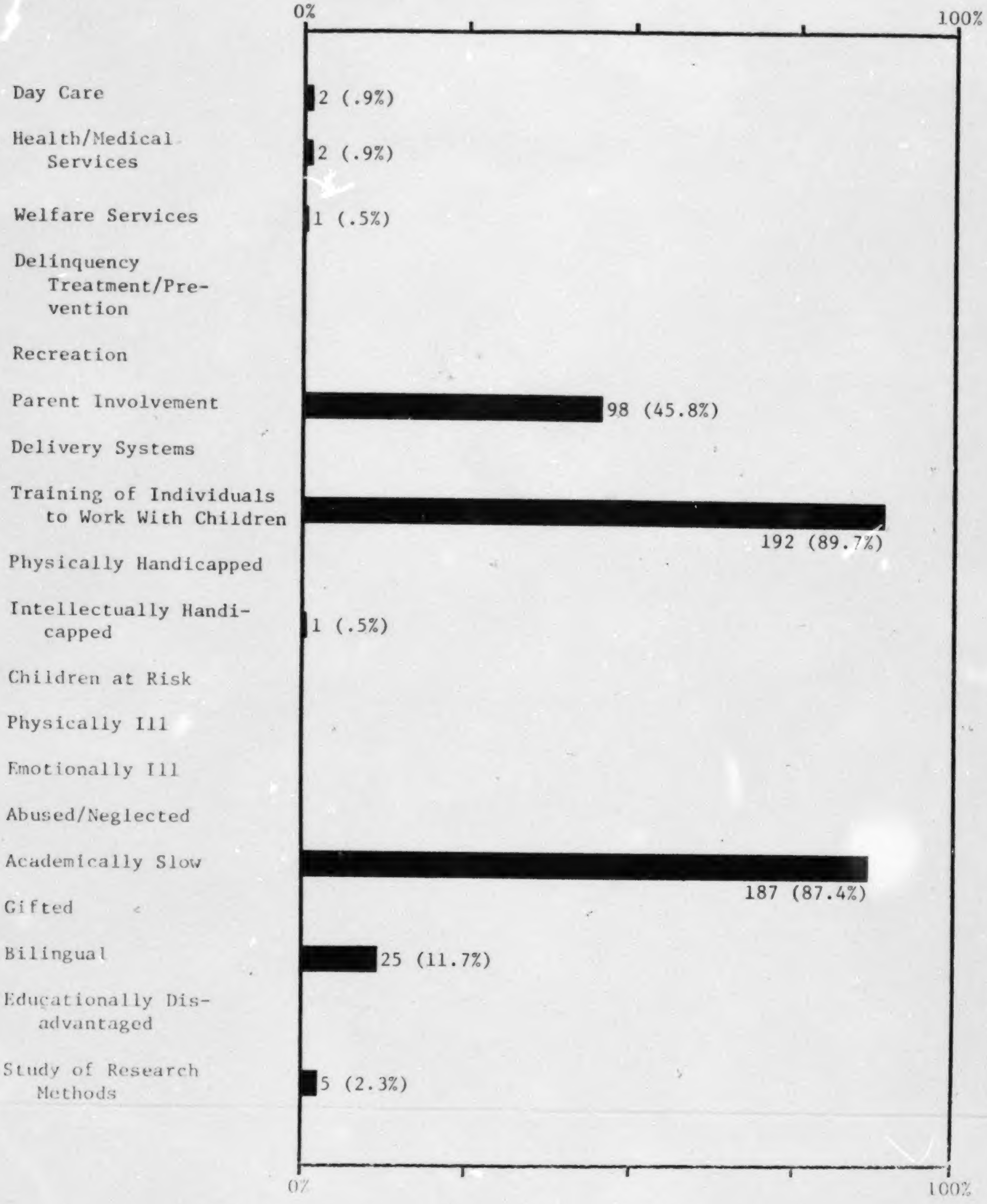


Figure 30 (Continued)

Distribution of Right to Read FY '76 Early Childhood Research Projects, By Area of Research (N=214)



Note. Categories are not mutually exclusive.

Table 99

Breakdown of Right to Read FY '76 Early Childhood Research Projects on Cognitive and Socioemotional Development

Category	No.	%^{a}
Total Research on Cognitive Development	99	(46.3)
Reading	77	(36.0)
Cognitive Achievement	28	(13.1)
Language	13	(6.1)
Imagery	10	(4.7)
Learning Processes	3	(1.4)
Creativity	3	(1.4)
Perception	2	(.9)
Problem Solving	2	(.9)
Memory	1	(.5)
Attention	1	(.5)
Concept Formation	1	(.5)
Computer Simulation of Thought	1	(.5)
Total Research on Socioemotional Development	15	(7.0)
Attitudes	10	(4.7)
Perception of Self	4	(1.9)
Motivation	1	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '76 early childhood research (214 projects).

Table 100

Distribution of Right to Read FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%^{a}
School	193	(90.2)
Home	9	(4.2)
Group Care Center	4	(1.9)
Community Center	2	(.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '76 early childhood research (214 projects).

Table 101

Breakdown of Right to Read FY '76 Early Childhood Research Projects on Instructional Techniques

Category	No.	%[a]
Total Research on Instructional Techniques	130	(60.7)
Individualized Instruction	102	(47.7)
Tutorial Instruction	49	(22.9)
Bilingual Instruction	19	(8.9)
Volunteer Community Service	8	(3.7)
Television Instruction	3	(1.4)
Cross-age Teaching	3	(1.4)
Peer Teaching	2	(.9)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '76 early childhood research (214 projects).

Table 102

Breakdown of Right to Read FY '76 Early Childhood Research Projects on Educational Curriculum

Category	No.	%[a]
Total Research on Educational Curricula	211	(98.6)
Language Arts	211	(98.6)
Reading	210	(98.1)
Cultural Awareness	4	(1.9)
Vocational/Technical Education	2	(.9)
Education for Parenthood	2	(.9)
Math	1	(.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total Right to Read FY '76 early childhood research (214 projects).

U.S. Department of Agriculture

- FY '76 Funding of Early Childhood Research: $1.2 million
- Number of Early Childhood Research Projects Active in FY '76: 79
- Mission and/or Functions in Early Childhood Research:

The USDA supports research in the Land Grant Institutions which is designed to develop human resource potential. The focus is on the family or household as a functioning unit, and the child as a source in the unit. The work includes studies of issues related to childhood such as nutritional status, early childhood education, the effects of the family, social and physical environment, and cognitive and physical developmental processes. In addition, the USDA Extension Service supports educational programming for children in a variety of areas, e.g., family life, day care, and home economics.

Distribution of FY '76 Early Childhood Activity

In FY '76 USDA continues to view the child in the context of the family as well as in a broader social context. Figure 31 reflects this wide range of foci in the even distribution of research across multiple areas: physical development (38%); cognitive development (33%); social-emotional development (41%); broader social environment (56%) and the family (33%).

USDA research activity focusing on the family is most heavily concentrated in the area of parental behavior (14%). However, as can be seen in Table 104, other aspects of family life are also investigated: parent-child relations (5%); child rearing practices (6%); and family/society interface (6%).

Research activity is high with regard to the three developmental processes. Table 105 reveals that the research on physical development is heavily concentrated in the area of nutrition (32%) with lesser emphasis devoted to studies of pregnancy and birth (9%) and physical characteristics (9%). Attitudes (17%) and interpersonal relationships (11%) are the categories most researched in the social-emotional area. Research on cognitive development is largely concerned with cognitive achievement and performance (18%).

The majority of USDA research is categorized as basic (75%) while the remainder of the projects are distributed between applied (10%) and evaluation (9%) studies. (See Table 103).

Plans for FY '77

A high level of interest is shown for issues relating to the family, such as family functioning, family's interface with society, ecology of the home and parenting skills. Research on the social environment will also continue to receive considerable attention. Emotional development and attitudes of children are areas of moderate interest for USDA in FY '77, as are physical health and nutrition services.

Figure 31

Distribution of USDA FY '76 Early Childhood Research Projects
By Area of Research (N=79)

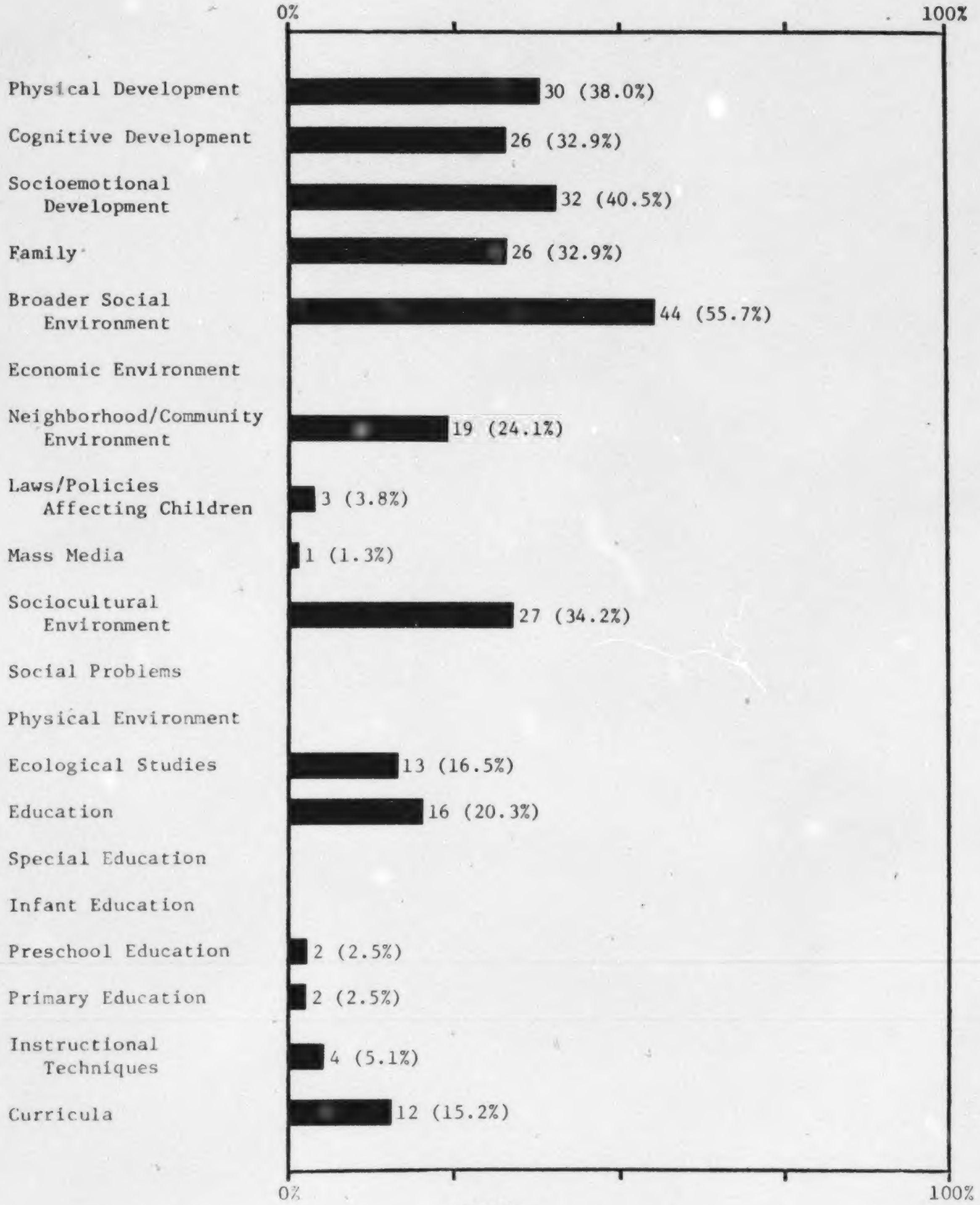
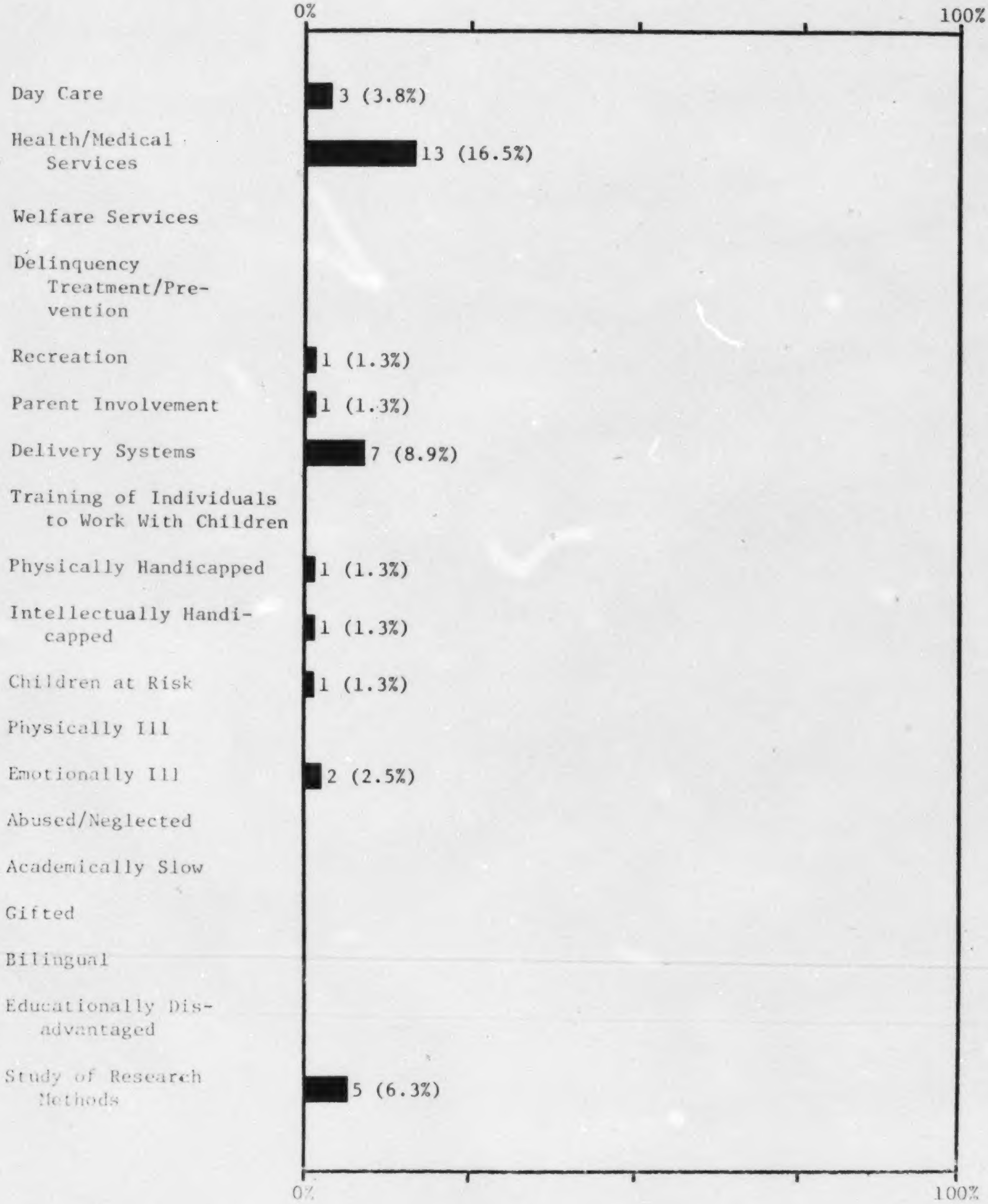


Figure 31 (Continued)

Distribution of USDA FY '76 Early Childhood Research Projects
By Area of Research (N=79)



Note. Categories are not mutually exclusive.

Table 103

Distribution of USDA FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Basic	59	(74.7)
Applied	8	(10.1)
Evaluation	7	(8.9)
Policy Research	3	(3.8)
Demonstration	2	(2.5)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '76 early childhood research (79 projects).

Table 104

Breakdown of USDA FY '76 Early Childhood Research Projects on the Family

Category	No.	%[a]
Total Research on the Family	26	(32.9)
Parental Behavior	11	(13.9)
Child Rearing	5	(6.3)
Family/Society Interface	5	(6.3)
Parent-Child Relationships	4	(5.1)
Family Structure	3	(3.8)
Family Health	2	(2.5)
Physical Environment of the Home	2	(2.5)
Sibling Relationships	1	(1.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '76 early childhood research (79 projects).

Table 105

Breakdown of USDA FY '76 Early Childhood Research Projects on Physical, Cognitive and Socioemotional Development

Category	No.	%[a]
Total Research on Physical Development	30	(38.0)
Nutrition	25	(31.6)
Pregnancy and Childbirth	7	(8.9)
Physical Characteristics	7	(8.9)
Motor Development	4	(5.1)
Body Growth	3	(3.8)
Total Research on Cognitive Development	26	(32.9)
Cognitive Achievement	14	(17.7)
Language Development	3	(3.8)
Learning Processes	3	(3.8)
Problem Solving	3	(3.8)
Perception	2	(2.5)
Memory	2	(2.5)
Intellectual Handicaps	1	(1.3)
Concept Formation	1	(1.3)
Reading	1	(1.3)
Play	1	(1.3)
Total Research on Socioemotional Development	32	(40.5)
Attitudes	13	(16.5)
Interpersonal Relationships	9	(11.4)
Personality	5	(6.3)
Perception of Self	3	(3.8)
Emotional Development	3	(3.8)
Motivation	3	(3.8)
Development of Values/Morals	2	(2.5)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '76 early childhood research (79 projects).

Table 106

Distribution of USDA FY '76 Early Childhood Research Projects, by Research Setting

Setting	No.	%[a]
School	11	(13.9)
Home	4	(5.1)
Group Care Center	4	(5.1)
Medical Clinic	1	(1.3)
Community Center	1	(1.3)
Residential Institution	1	(1.3)

Note. Categories are not mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total USDA FY '76 early childhood research (79 projects).

National Institute for Juvenile Justice and Delinquency Prevention
Office of Juvenile Justice and Delinquency Prevention
Law Enforcement Assistance Administration
U.S. Department of Justice

- FY '76 Funding of Early Childhood Research: $1.0 million
- Number of Early Childhood Research Projects Active in FY '76: 11
- Mission and/or Functions in Early Childhood Research:

The National Institute for Juvenile Justice has five major functions: (1) to conduct, encourage, and coordinate research relating to any aspect of juvenile delinquency; (2) to conduct, encourage, and coordinate evaluation relating to any aspect of juvenile delinquency; (3) to collect, prepare, and disseminate useful data regarding the treatment and control of juvenile offenders; (4) to provide training for personnel connected with the treatment and control of juvenile delinquency; and (5) to develop standards for the administration of juvenile justice at the Federal, state, and local levels.

The Institute's research and evaluation efforts are coordinated with and support the discretionary programs of the Office of Juvenile Justice. Some of the major programs include the following: the deinstitutionalization of status offenders (juveniles who have committed acts that would not be criminal for adults); diversion of offenders from the juvenile justice system; reduction of serious crime committed by juveniles; and juvenile delinquency prevention. The last category, concerning prevention, is of primary relevance to early childhood research.

Distribution of FY '76 Early Childhood Activity

The LEAA research on children focuses primarily on social problems (82%) which includes research on delinquency treatment and prevention (64%). As can be seen in Table 107, several kinds of research approaches are used: applied (36%); policy research (36%); and evaluation research (27%).

Figure 32

Distribution of LEAA FY '76 Early Childhood Research Projects, By Area of Research (N=11)

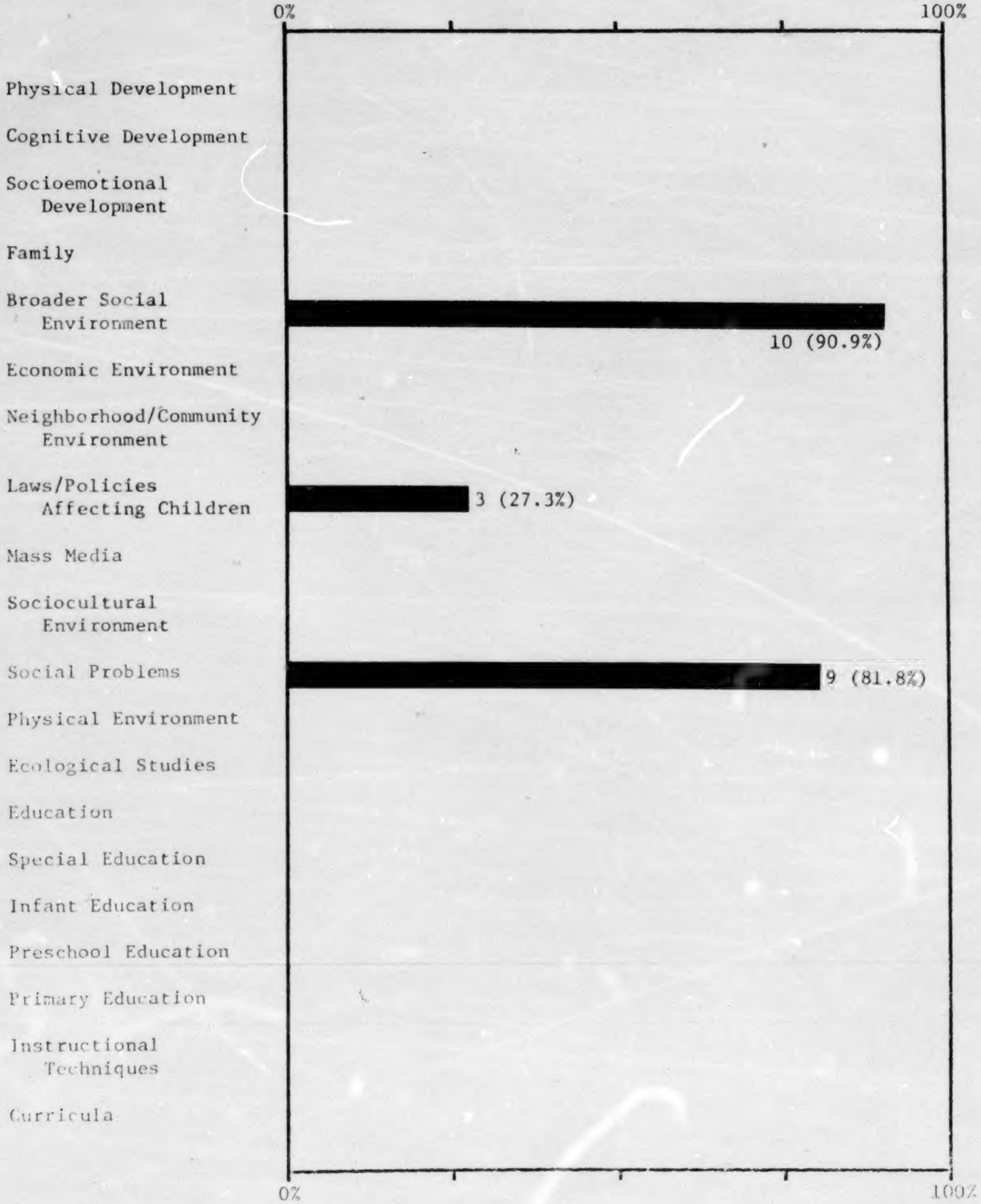
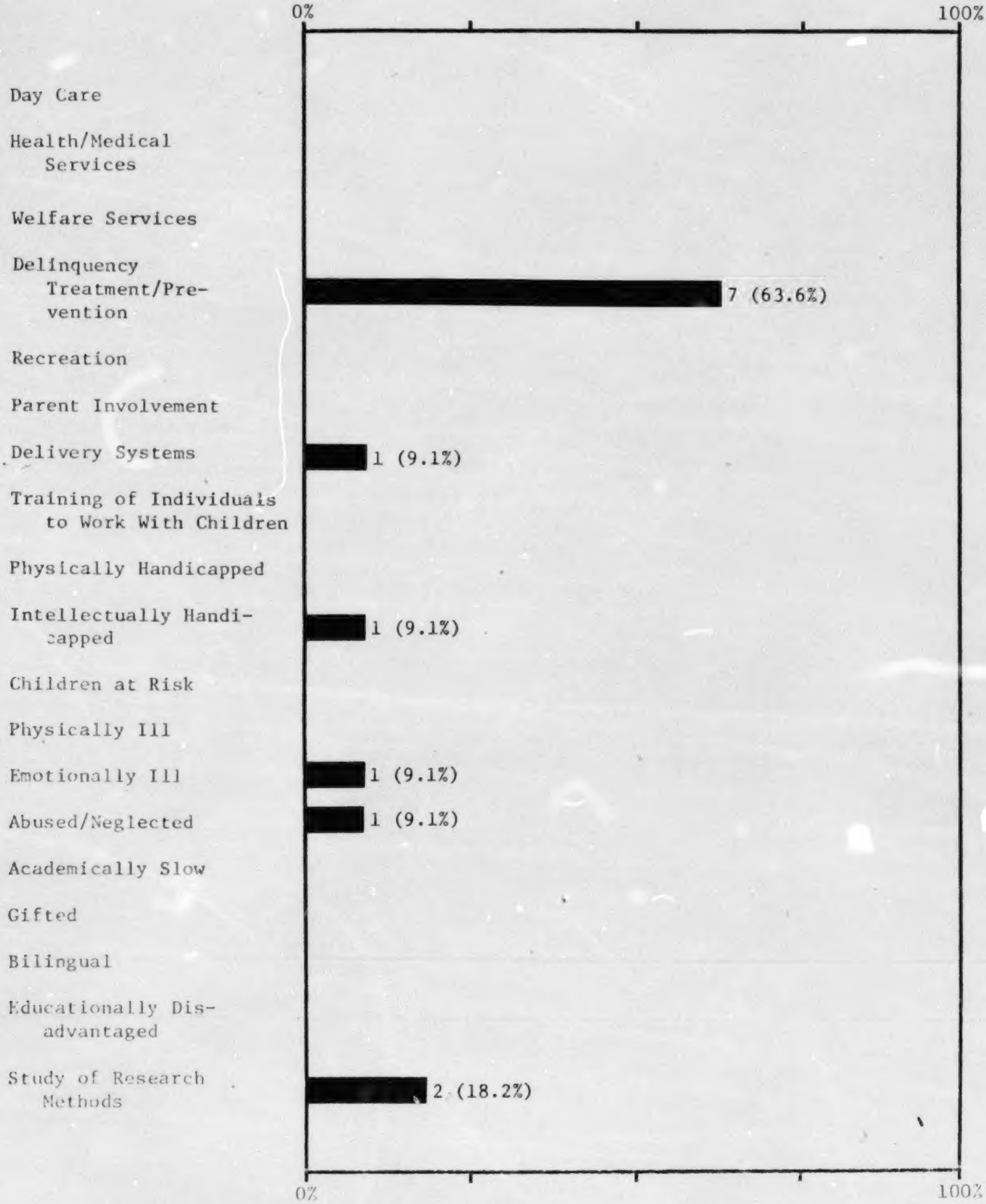


Figure 32 (Continued)

Distribution of LEAA FY '76 Early Childhood Research Projects, By Area of Research (N=11)



Note. Categories are not mutually exclusive.

Table 107

Distribution of LEAA FY '76 Early Childhood Projects, by Kind of Research

Kind of Research	No.	%[a]
Applied	4	(36.4)
Policy Research	4	(36.4)
Evaluation	3	(27.3)

Note. Categories are mutually exclusive; they are ranked according to number of projects.

[a] Percentage of total LEAA FY '76 early childhood research (11 projects).

APPENDIX A

AGENCY PLANS FOR EARLY CHILDHOOD RESEARCH IN FY '77

The data shown in this appendix were derived from questionnaires distributed to individuals within the member agencies. For each area, the agencies who indicated a high, medium or low level of interest are listed in the appropriate columns. A rating of high indicates that an agency will give a relatively great deal of priority to research activity in that area. Medium is designated when the research area is of substantial but secondary interest to the agency. Low denotes areas of research which might be supported but on a very low priority basis. A plus or minus shown in parentheses following an agency acronym indicates that the agency's FY '77 level of interest in that area has increased or decreased significantly from FY '76.

Agency Plans for Early Childhood Research in FY '77

Specific Interests By General Area	Level of Agency Interest FY '77		
	HIGH	MEDIUM	LOW
THE DEVELOPMENTAL PROCESSES			
Cognitive development	NIE, NIMH	OCD, BEH	
Perception/attention	BCHS,NIE,NICHD, NIMH	OIE, OCD, BEH	USDA
Thought processes	NIE,OIE,NICHD, NIMH	USDA, OCE, BEH	
Learning	NIE,NICHD,NIMH, BEH	USDA,OCD,BCHS	
Language	NIE,NICHD,NIMH	OIE(+), OCD, BEH, BCHS	
Intellectual handicaps	NCES,NICHD,BEH, NIMH, BCHS(-)	OCD	NIE, USDA
Socioemotional development	NIE, NIMH	OIE, NCES, OCD	
Self-concept (e.g., locus of control, sexual identity)	NIE, NIMH	OPBE	USDA, NICHD
Interpersonal relationships	NIE, USDA	NCES,NICHD,BEH	
Emotional development (e.g., anxiety, alienation)	NIE,NIMH,BEH	OIE,NCES,USDA, OCD	NICHD
Attitudes	NIE, NIMH	OIE, USDA, OCD NICHD, BEH	
Moral development		NIE, OCD (+), NIMH	NICHD
Physical development			NIMH
Body growth	BCHS	NICHD (-)	USDA, OCD, NIMH
Sensorimotor development	BCHS	OCD,NICHD,BEH	NIE, USDA, NIMH
Physical disease and illness	BCHS	NICHD, NIMH(+)	OIE, USDA
Fetal and neonatal health/ nutrition	NICHD, BCHS		NIE,USDA,NIMH(-
Physical handicaps	BCHS	NCES,OCD,NICHD, NIMH(+)	NIE, OPBE
THE CHILD'S ENVIRONMENT			
The family	OIE(+),OCD,NIMH	NIE	NIE
Structure of the family	OIE(+), NCES, OCD, NIMH	USDA(+)	OCE(+),NICHD(-)
Family functioning (including intrafamily relationships)	OIE(+), NIMH		NIE, OCE(+), NICHD(-)

Agency Plans for Early Childhood Research in FY '77 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '77		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
The family (Cont.)			
Family health		NCES, USDA(+), OCD, BCHS	NICHD, NIMH
Family's interface with society	USDA, OCD,NIMH	NIE, NCES	OCE(+), NICHD
Ecology of the home (e.g., child's interaction with home surroundings)	USDA, NIMH	NCES, OCD, BEH (+)	OCE(+), NICHD
Parenting skills (parent education)	OIE (+), USDA, OCD, NIMH, BEH	NIE,NCES,NICHD, BCHS	OPBE
Involvement of parents in research/development	NIMH	OCD, BCHS	NIE NCES, USDA
The neighborhood/community environment	OCE (+), NIMH	NIE	
Social environment (e.g., interrelationships among people, institutions, services)	NIE,OIE,OCE(+), USDA	OCD, NIMH, BEH	NICHD
Peers	NIMH	NIE	USDA(+), NICHD
Physical environment (e.g., facilities, housing)	OIE	NIE, USDA, NIMH (+)	NICHD, BCHS(-)
Social/cultural/religious influences	NIMH	NIE, USDA, OCD	NICHD
Mass-media and TV	NIMH (+)	NIE, OCD	OIE (-), USDA, NICHD
Social changes and crises (e.g., unemployment, geographic mobility)	NICHD, NIMH(+)		NIE, USDA, OCD
Legal rights and responsibilities of children	NIMH	NIE, OCD, BEH	USDA, NICHD
Day care		NIMH	
Impact on the child		OCD, NIMH,BCHS	USDA, NICHD
Impact on the family		OCD, NIMH	USDA, NICHD
Delivery of day care services	OCD	BCHS	USDA, NIMH
Alternatives to center-based day care	NIMH	OCD	USDA

Agency Plans for Early Childhood Research in FY '77 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '77		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
Education			
Infant education/stimulation programs	NIMH, BEH(+)	OCD,NICHD,BCHS	NIE
Preschool education	NCES, OCD(+) NIMH, BEH	USDA, NICHD	NIE, OPBE
Special education	NCES,NIMH,BEH	OCD,NICHD	NIE, OPBE
Instructional techniques	NIE, BEH	NCES,NIMH,OPBE	USDA, NICHD
Curricula	NIE, BEH	NCES,OCD,OPBE	OCE(+), USDA, NIMH(-)
Bilingual instruction	NIE,NCES,OCD(+)	BEH, OPBE	OCE(-),NIMH(-)
Teaching innovations (e.g., open classroom)	NIE, BEH	OCD, OPBE	OIE(-),NCES, USDA, NICHD, NIMH(-)
Equipment/technological innovations (e.g., TV)	NIE,BEH	NCES	OIE,NIMH,OPBE
Basic skills	NIE	NCES,BEH,OPBE	OCE(+),NIMH
Reading	NIE,NICHD(+)	OCD,NIMH,OPBE	
Desegregation	NIE, NCES	OPBE	NIMH (-)
Voucher plans			NIE(-),NCES, NIMH
Career awareness	NIE, OCE (+), BEH	OIE (+), NCES OPBE	NIMH
Health care and services	NIMH, BCHS		
Mental health	NIMH	BEH	USDA, OCD, BCHS
Physical health	BCHS	USDA	OCD,NICHD,NIMH
Child abuse (e.g., diagnosis, treatment)	OCE, BCHS	BEH	NICHD, NIMH (-), NCES
Nutrition	NICHD, BCHS	USDA, NIMH(-)	NIE,NCES,OCD
Handicaps	NCES,NICHD,BCHS	NIMH, BEH	USDA, OCD
Pre- and post-natal care	NICHD,NIMH,BCHS		USDA, OCD
Family planning	NICHD	NIMH(+), BCHS	USDA(+), OCD
Welfare services		NIMH	
Foster care and adoptive services	OCD (+)		NIMH, BCHS
Child abuse (e.g., prevention, intervention, family support)	OCD, BCHS	NIMH(-), BEH	

Agency Plans for Early Childhood Research in FY '77 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '77		
	HIGH	MEDIUM	LOW
THE CHILD'S ENVIRONMENT (Cont.)			
Welfare services (Cont.)			
Emergency services		OCD, BCHS	NIMH
Advocacy		OCD, NIMH(-)	
Global approach	NIMH		
Whole child/interrelations among developmental processes	OCD, NIMH	USDA,NICHD(-), BEH	NIE
Ecological studies	OCD, NIMH	NCES, USDA, NICHD	
Combined and/or comparative effects of social programs	OCD, NIMH	NIE,NCES,BEH	USDA
RESEARCH TARGET GROUP			
Prenatal	NICHD, BCHS		NIE,USDA,NIMH(-)
Infancy	NICHD, NIMH, BCHS	OCD, BEH	NIE, USDA
One to three years of age	OCD, NICHD, NIMH,BEH,BCHS		NIE, USDA
Preschool age	USDA,OCD,BEH, NICHD,NIMH,BCHS	NCES	NIE
Kindergarten and elementary	NIE,NCES,BEH NICHD	OCE(+),USDA, OCD,NIMH(-), OPBE,BCHS	
Minority ethnic groups	NIE,OIE,NCES, OCD, NIMH	OCE(+),OPBE	USDA,NICHD,BCHS
Disadvantaged	NIE,NCES,OCD, NIMH,BCHS	OCE(+),NICHD, OPBE	
Gifted	NIE,NCES,OCE	OCE(+),NIMH(+) BEH,OPBE	USDA,NICHD
Average ability	NIE,NCES,OCD	OCE(+),OCD, OPBE	USDA,NIMH
Physically handicapped	NCES,BEH,BCHS	OIE(+),OCE(+), OCD,NIMH(+), OPBE	NIE,NICHD
Intellectually handicapped	NCES,NICHD, NIMH,BEH,BCHS	OIE(+),OCE(+), OCD(-),OPBE	NIE
Bilingual	NIE,NCES,OCD	BEH, OPBE	OCE,USDA,NICHD, NIMH(-)
Learning disabled	NCES,NICHD(+), NIMH,BEH,BCHS	OIE(+),OCE(+), OCD(-),OPBE	NIE

Agency Plans for Early Childhood Research in FY '77 (Continued)

Specific Interests By General Area	Level of Agency Interest FY '77		
	HIGH	MEDIUM	LOW
RESEARCH ON METHODOLOGY			
Tests and measures development	OCD, BEH	NIE, NCES, OCE, USDA, NIMH(-), BCHS	OIE(+), NICHD
Program evaluation methods	NIE, OIE(+), OCD, NCES, BCHS	OCE(+), USDA, BEH(+)	NICHD
Observational methods	NIMH	OCD, BEH, BCHS	NIE, NCES, USDA, NICHD
Interview, survey, questionnaire methods	NCES, NIMH, OPBE	OPBE, BEH	NIE, USDA, NICHD, BCHS
Research design	NIE, NCES, NIMH, OPBE	USDA, OCD, NICHD, BEH, BCHS	
Statistical techniques	NIE, NCES, OPBE, BCHS	OCD, NICHD, NIMH(-), BEH	
Methodology of longitudinal research	NCES, NIMH, OPBE	NIE, USDA, OCD, BEH, BCHS	NICHD
Methods to improve comparability	NCES, OCD, NIMH	NIE, NICHD, BEH	OCE(+), USDA, OPBE, BCHS
STUDY OF RESEARCH PLANNING AND DISSEMINATION			
Planning interagency research		NIE, NCES, OCD, NIMH, BEH	USDA, NICHD, BCHS
Planning interdisciplinary	NIE, OCE, NIMH(+) BEH(+)	USDA, NICHD, BCHS	NCES
Conferences/studies relating to Federal research needs and goals	NIE, OCE(+), NICHD, NIMH(+)	NCES, OCD, BEH, BCHS	
State-of-the-art papers	NCES, OCE(+), OCD, NIMH(+)	NIE, USDA, NICHD BEH	BCHS(-)
Studies of dissemination/utilization of findings	NIE, NCES, OCD, NIMH(+), BEH, BCHS	USDA, OPBE	NICHD
Development of information collection, processing and analysis systems	NCES, OCE, NIMH, BEH, BCHS	NIE, OCE(+), USDA, OPBE	NICHD

APPENDIX B

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National Center for Education Statistics (NCES)

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*Persons listed here were acting as representatives of their agencies on the Interagency Panel on Early Childhood Research and Development as of February, 1977. This list is subject to change.

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Office of Human Development (OHD)

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APPENDIX C

GUIDELINES AND PROCEDURES FOR USE OF INTERAGENCY PANEL INFORMATION SYSTEM

The Interagency Panel on Early Childhood Research and Development established a computerized data system in 1970 which facilitated the sharing of information and encouraged the coordination of planning among the member agencies. Prior to its establishment no organization had centrally collected and disseminated information about ongoing research from the Panel's member agencies. In 1972 the Early Childhood Panel was joined by the Interagency Panel for Research and Development on Adolescence. Separate data banks were maintained until 1973 when a joint system was formed. The data bank, now in its sixth year of existence, features a unique and expanding data file on early childhood and adolescence research projects funded by member agencies across the Federal government.

Annually since 1971, the Social Research Group staff has updated a taxonomy of coded descriptors which is used to classify the salient features of each project. In the early years of the Panel, agency representatives classified their own agency's projects and that information became the basis of the computerized data bank. Today, however, the data collection and computerization effort has grown considerably. The Panel's support staff now collects and codes the projects from a growing number of member agencies. The computerized data system currently contains over 4,400 projects on early childhood and adolescence; these are classified by 690 descriptors and 483 test codes, as compared with a 1971 data bank of 750 projects classified by 150 descriptors. This expanded collection and classification effort allows for more comprehensive, yet detailed, research analyses.

Data System Operation

Essentially, the data system is composed of three data files: the literal file, the numeric file, and the abstract file. (1) The literal file contains the project identification number, project title, Federal catalog number (available in FY '76), the name of the principal investigator, his/her organization, and amount of funding. (2) The numeric file contains coded descriptors which characterize each project. Each descriptor is a four-digit code representing one concept (e.g., a competitive grant, a bilingual targeted population, or maternal health as the research area). The coding system is broad enough in scope to include detailed information about a project's funding and duration, sample characteristics, instrumentation, purpose, methodology and data collection techniques, and areas of research focus. (3) The abstract file contains a brief abstract for each research project in the data system. Each abstract describes the purpose, objectives, methodology, and when available, the sample characteristics and the instrumentation used in the study. Given the premise that the information available is intended to function as a guide to direct the requestor toward the principal investigator and/or the sponsoring agency for further information, the abstracts are kept as short and concise as possible.

File Access

There are two separate methods of accessing the file: (1) Table Producing Language (TPL); and (2) Extract. When using TPL, one can receive counts, funding, percents and other statistics on the numerical codes (but not the titles and abstracts of projects). This can be done on a simple level, for example, a count of projects studying research methods; or on a more complex level, for example, count and funding of projects involving physically handicapped children, organized by age groups and by agencies. This latter example would produce the following output:

Physically Handicapped

Agency	Primary Age Focus					
	Children in General	Prenatal and Infancy	Ages 2-4	Ages 5-9	Ages 10-17	Ages 18-24
BCHS projects	6	3	0	1	0	3
funding[1]	.50	.20	0	.15	0	0
NIMH projects	42	1	1	5	3	1
funding[1]	1.72	0	.04	.22	0	.01
etc.						

[1] Funding given in millions of dollars.

Extract is used to access the literal or abstract file. By requesting a code or set of codes, one can get any or all of the literal file for each relevant project. For instance, one can obtain lists of the titles of projects in special areas or categories of research, as well as the abstracts of those projects.

For FY '73 and FY '74 the only program that is available to access the data file provides either: (1) agency totals and overall totals (number and funding) of those projects which qualify for any given request; and (2) all of the latter items plus the titles of those projects which qualify.

How to Make a Request

A request for information about the data system projects may be made in writing or by telephone to:

Social Research Group, GWU
Attn: Sharon Mangus
2401 Virginia Avenue, N. W.
Washington, D. C. 20037

Telephone (202) 331-8706

In general, the more clearly defined the request, the more relevant the response to that request. The request should specify areas of interest (e.g., use of psychotherapy on preschool children) and, if possible, areas in which there is no interest (e.g., no basic research projects).

Policy for Information Release

The general policy of both Panels is that all information in the data bank should be made available to whoever makes a request. In recent years an increased number of requests for information has come from interested agencies and from persons outside the Federal government, and there has been a larger increase in dissemination of information from the data system this year than in any previous year. Because of this increase, requests from non-Federal government sources must be fulfilled on a cost-reimbursement basis. Numerous requests have been answered for Panel member agencies, other Federal agencies, Congressional committees, universities, foundations, institutes, and individual researchers.

In order to keep the Panel members informed of all requests that are received, the Social Research Group keeps a log of the following information: (1) name of requestor and organization; (2) nature of request; (3) information supplied in terms of the data maintained in the Interagency Research Information System. Staff reports on requests and responses are made to the Chairperson of the Panels.

APPENDIX D

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APPENDIX E

DOCUMENTS PREPARED FOR THE INTERAGENCY PANELS ON EARLY CHILDHOOD AND ADOLESCENCE RESEARCH AND DEVELOPMENT*

Section 1: 1975-1976

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*Listed documents are available from the Social Research Group, George Washington University. Documents with an ERIC number may be ordered from ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210, (703) 841-1212.

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